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Aging Expectations Predict Subjective Cognitive Decline Among Community-Dwelling Older Adults

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Introduction

- Subjective cognition: A individual's personal experiences about their cognition¹
- Subjective cognitive decline (SCD): "the self-reported experience of worsening or more frequent confusion or memory loss."²
- Linked to early stages of Alzheimer's Disease and mild cognitive impairment (MCI)
- Older adults with SCD up to 4 times more likely to develop MCI or dementia³
- Aging expectations: "A person's belief about how well they will maintain their cognitive and physical health as they age"⁴
- Linked to objective measures of cognition, general physical health, and rates of psychological diseases such as dementia and depression⁵
- Patients with positive aging beliefs were found to have almost half the chance of developing dementia compared to those with more negative aging beliefs⁶
- Previous works have found longitudinal and cross-sectional links between aging expectations and SCD⁷
- The relationships between specific domains of aging expectations and SCD remains unclear.

Study Purpose

The aim of this cross-sectional study was to investigate the relationships between older adults' aging expectations regarding physical health, mental health, and cognitive function, and subjective cognitive decline (SCD).

Methods

- An online survey of community-dwelling adults aged 65 years or older (n=582, M(SD)=71.36(4.80)) with no history of dementia or cognitive impairment was conducted in the United States.
- Measures included:
 - Expectations Regarding Aging scale (ERA-12)
 - Everyday Cognition scale (ECog-12),
 - Demographics and self-reported health.
- General linear models were used to investigate relationships between the physical, mental, and cognitive expectations subscales of the ERA-12 and ECog-12 scores.

Older adults' aging expectations across physical health, mental health, and cognitive function domains were predictive of subjective cognitive decline (SCD)

Results

Figure 1. Conceptual Framework

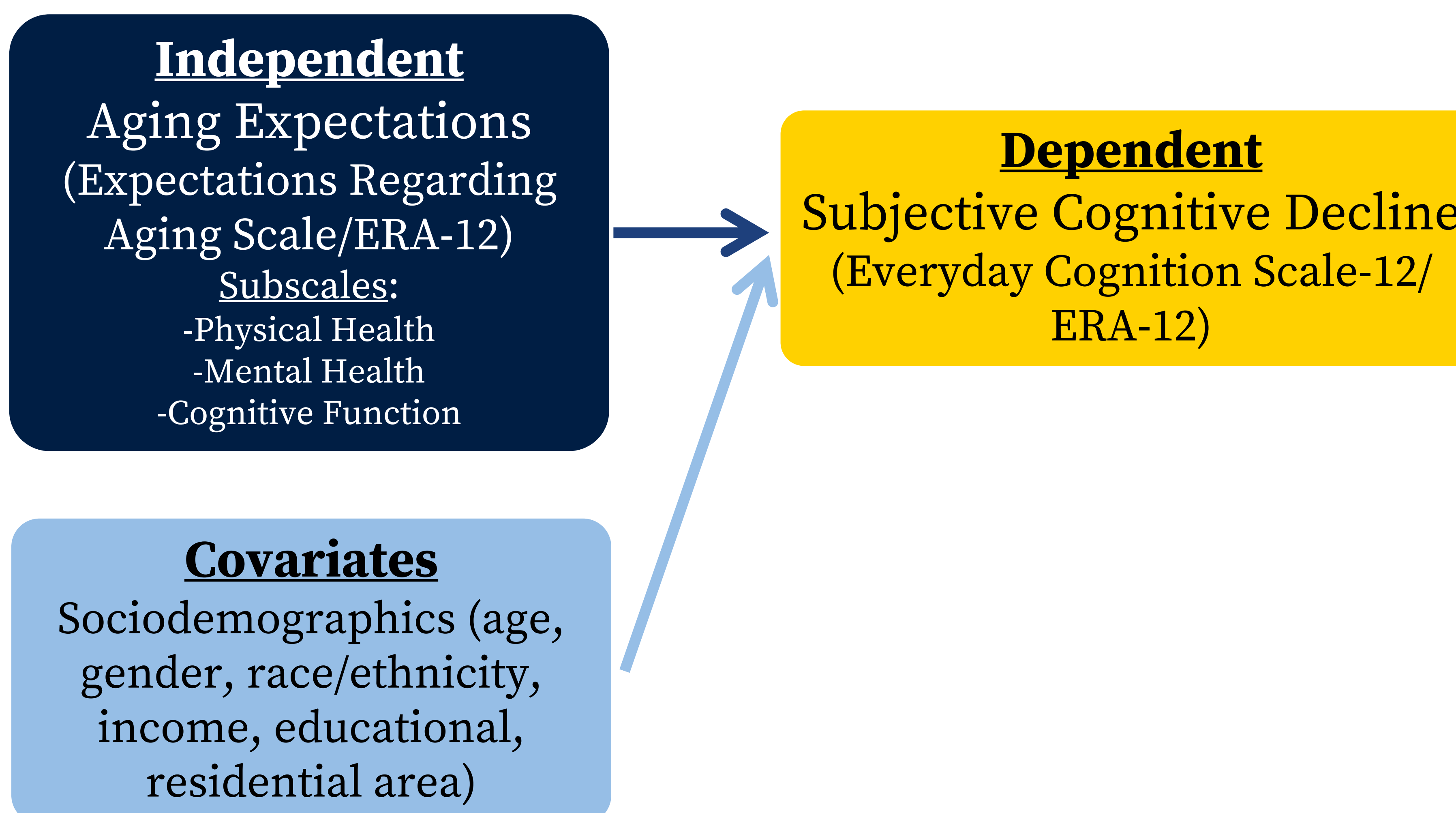


Table 1. Associations between Aging Expectations and Subjective Cognitive Decline

	b (SE)	t	Pr > t
Intercept	1.37 (0.069)	19.9	< 0.0001
Total ERA	-0.02*** (0.003)	-7.69	< 0.0001
Physical	-0.033*** (0.007)	-3.38	< 0.0001
Mental	-0.039*** (0.006)	-6.58	< 0.0001
Cognitive	-0.044*** (0.06)	-7.15	< 0.0001
Gender			
Male	0.033 (0.036)	0.92	0.3573
Female	0.094 (0.392)	0.24	0.8114
Age	-0.011** (0.004)	-3.06	0.0023

Note. ERA, Expectations Regarding Aging. *** $p \leq .001$. ** $p \leq .01$, * $p \leq .05$

- **n=582, Age M(SD)=71.36(4.80), Range: 65-90**
- 50% Male/50% Female, 74% White, 13% African-American, 5% Hispanic/Latino, 8% Other
- Balanced Sampling of Income (normally distributed, median \$40,001-\$60,00) and Education
- **More positive aging expectations, both overall and in each of the domains (Physical Health, Mental Health, and Cognitive Function), were all significantly related to decreased subjective cognitive decline.**

Discussion

- Our results add to the body of literature, finding that expectations of varying domains predicted SCD among a US-based community dwelling population of older adults.
- All three domains predicted SCD, demonstrating that expectations regarding physical health, mental health, and cognitive function all play important roles in forming individual's ratings of SCD.
- These findings emphasize the importance of viewing concepts such as SCD and aging expectations not as monolithic constructs, but as multifaceted beliefs with distinct domains, which in turn can lead to more complex relationships.
- Work must be done to continue to evaluate and explore how the relationship between aging expectations and SCD may differ in different populations than the one studied (middle aged adults, adults with dementia, or varying countries with different cultural beliefs than the United States).
- The relationship between aging expectations and SCD presents a possible avenue of reducing the experience of SCD among older adults if better understood, as interventions have been shown to successfully modify aging beliefs⁸
- Elucidating the link between aging expectations and SCD will allow us to better understand factors that influence in SCD reporting, in turn improving the specificity of SCD as an indicator of subtle cognitive decline which may lead to improved early detection of Alzheimer's Disease.

References

1. Rabin LA, Smart CM, Amariglio RE. Subjective cognitive decline in preclinical Alzheimer's disease. *Annu Rev Clin Psychol.* 2017;13:369-396. doi:10.1146/annurev-clinpsy-032816-0451365.
2. Subjective Cognitive Decline — A Public Health Issue. Published July 30, 2019. Accessed February 5, 2024. <https://www.cdc.gov/aging/data/subjective-cognitive-decline-brief.html>
3. Jessen F, Amariglio RE, Bostel M, et al. A conceptual framework for research on subjective cognitive decline in preclinical Alzheimer's disease. *Alzheimer's & Dementia.* 2014;10(6):844-852. doi:10.1016/j.jalz.2014.01.0013.
4. Breda AI, Watts AS. Expectations Regarding Aging, Physical Activity, and Physical Function in Older Adults. *Gerontol Geriatr Med.* 2017;3:2333721417702350. doi:10.1177/2333721417702350
5. Tully-Wilson C, Bojack R, Millier PM, Stallman H, Andrew A, Mason J. Self-perceptions of aging: A systematic review of longitudinal studies. *Psychology and Aging.* 2021;36(7):773-789. doi:10.1037/pag00006386.
6. Levy BR, Slade MD, Pietrzak RH, Ferrucci L. Positive age beliefs protect against dementia even among elders with high-risk gene. *PLOS ONE.* 2018;13(2):e0191004. doi:10.1371/journal.pone.0191004.
7. Cohn-Schwartz E, Finlay JM, Kobayashi LC. Perceptions of societal ageism and declines in subjective memory during the COVID-19 pandemic: longitudinal evidence from US adults aged ≥55 years. *Journal of Social Issues.* 2022;n/a(n/a). doi:10.1111/josi.125442.
8. Bardach ShoshanaH, Gayer ChristopherC, Clinkinbeard T, Zanjani F, Watkins JohnF. The Malleability of Possible Selves and Expectations Regarding Aging. *Educational Gerontology.* 2010;36(5):407-424. doi:10.1080/03601270903212393

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Conflict of Interest Disclosure
The authors declare no competing interests.
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