

metrics may vary by cognitive domain in healthy older adults.

Categories: Aging

Keyword 1: aging (normal)

Keyword 2: cognitive functioning

Keyword 3: executive functions

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31 Understanding Health Beliefs and Health Behaviors in Older Adults at Risk for Alzheimer's Disease

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Objective: Given the aging population, there are significant public health benefits to delaying the onset of Alzheimer's disease (AD) in individuals at risk. However, adherence to health behaviors (e.g., diet, exercise, sleep hygiene) is low in the general population. The Health Belief Model proposes that beliefs such as perceived threat of disease, perceived benefits and barriers to behavior change, and cues to action are mediators of behavior change. The aim of this study was to gain additional information on current health behaviors and beliefs for individuals at risk for developing AD. This information can then be used to inform behavioral interventions and individualized strategies to improve health behaviors that may reduce AD risk or delay symptom onset.

Participants and Methods: Surveys were sent to the Rhode Island AD Prevention Registry, which is enriched for at-risk, cognitively normal adults (i.e., majority with a family history and/or an APOE e4 allele). A total of 177 individuals participated in this study. Participants were 68% female; 93% Caucasian and non-Hispanic; mean age of 69.2; 74% with family history of dementia; 40% with subjective memory decline. The survey included measures from the Science of Behavior Change (SoBC) Research Network to measure specific health belief factors, including individual AD risk, perceived future time remaining in one's life, generalized self-efficacy, deferment of gratification, consideration

of future consequences as well as dementia risk awareness and a total risk score for dementia calculated from a combination demographic, health and lifestyle behaviors.

Results: Participants who were older had higher scores for dementia risk ($r=0.78$), lower future time perspective ($r=-0.33$), and lower generalized self-efficacy ($r=-0.31$) (all at $p<0.001$). Higher education correlated with higher consideration of future consequences ($r=-.31$, $p<0.001$) and lower overall dementia risk score ($r=-0.23$, $p=0.006$). Of all scales examined, only generalized self-efficacy had a significant linear relationship to both frequency ($r^2=0.06$) and duration ($r^2=0.08$) of weekly physical activity ($p<0.001$). Total dementia risk score also had significant linear relationships ($r^2=0.19$) with future time perspective ($p<0.001$) and generalized self-efficacy ($p=0.48$).

Conclusions: Overall, individuals who rated themselves higher in self-efficacy were more likely to exercise more frequently and for a longer duration. Individuals who had lower overall risk for dementia due to both demographic and behavioral factors were more likely to endorse higher self-efficacy and more perceived time remaining in their lives. Increasing self-efficacy and targeting perceived future time limitations may be key areas to increase motivation and participation in behavioral strategies to reduce AD risk. Developing individual profiles based on these scales may further allow for individually tailored intervention opportunities.

Categories: Aging

Keyword 1: aging disorders

Keyword 2: cognitive screening

Keyword 3: self-report

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33 The Impact of Context on Memory for Short Stories Among Older and Younger Adults

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Objective: On traditional pattern separation tasks, older adults perform worse than younger adults when identifying similar objects but

perform equally well when recognizing repeated objects. When objects are superimposed on semantically related scenes, older adults are influenced by the context to a greater degree than younger adults, leading to errors when identifying similar objects. However, in everyday life, people rarely need to differentiate between two perceptually similar objects. Therefore, we developed a task using short stories to represent similar events people may experience in daily life. Our goal was to investigate the influence of context, detail-type, and age on memory performance.

Participants and Methods: Twenty-one older and 18 younger adults listened to 20 short stories taking place in either a coffee shop or library, each paired with a unique picture (i.e., context). Participants were asked to imagine the story taking place within the picture.

Approximately 20 minutes later, participants answered a yes/no question about a detail from a story superimposed on different contexts. The different context conditions were (1) the same picture from the original story, (2) a similar picture (i.e., a different library or coffee shop picture), (3) a dissimilar picture (i.e., a library picture instead of a coffee shop picture), or (4) a control using a Fourier-transform (FT) image without any spatial-context information.

Questions either asked about an identical or similar detail from the story.

Results: Correct answers were analyzed using a 4x2x2 repeated measures ANOVA including context (same, similar, dissimilar, and FT), detail type (identical and similar), and age (younger and older adults). Overall, younger adults were more accurate than older adults, $F(1,37)=23.4$, $p<0.001$. However, surprisingly, the context and detail-type made no difference in accuracy, (F 's <1.1) A similar model was used to analyze reaction times. Younger adults were faster than older adults, $F(1,37)=23.4$, $p<0.001$. Participants of both ages were faster at correctly responding to the identical detail than the similar detail, $F(1,114)=62.87$, $p<0.001$. Context also impacted reaction time, $F(3,114)=7.97$, $p<0.001$. All participants were faster while viewing same and similar contexts compared to both the dissimilar and FT contexts ($t(39)$'s >2.20 , p 's <0.05).

Conclusions: We did not find the kinds of age-related effects normally observed on traditional pattern separation tasks. Although younger adults performed better overall, older adults were not any worse when responding to a similar detail compared to an identical detail, which is inconsistent with performance on

pattern separation tasks where older adults perform worse when identifying similar objects compared to younger adults. Additionally, older and younger adults were influenced by context in the same way. Previous studies from our laboratory demonstrated that older adults are biased toward the context when recognizing similar objects, but the context in this paradigm did not differentially influence accuracy for either older or younger adults. Potentially, this task relies on more semantic similarity rather than the perceptual similarity of objects. Semantic similarity from the short stories may incorporate more information to better orthogonalize similar memories, rendering retrieval less susceptible to interference.

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34 Association Between Subjective Cognitive Decline and Mental Wellbeing in Normal Cognition and MCI Older Adults

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Objective: Subjective cognitive decline (SCD, i.e., perceived cognitive decline without neuropsychological deficits) is associated with Alzheimer's disease pathology and increased risk for cognitive impairment but is heterogeneous in etiology and has been linked to other factors including personality and depression. Mental wellbeing (i.e., the perception and functioning of social, emotional, and health-related aspects of one's life) has been associated with subjective memory complaints, but its relationship with other subjective cognitive domains is poorly understood. Further characterizing the relationship between mental wellbeing and SCD could refine understanding of SCD and inform development of interventions that prevent progression to objective cognitive decline. This