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 heterogenous 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

study aimed to describe the relationship between mental wellbeing and subjective decline in multiple cognitive domains and examine whether this relationship differs between older adults with normal cognition and those with mild cognitive impairment (MCI).

Participants and Methods: Community-dwelling older adults (normal: n = 58, M_{age} = 73.7±5.6; MCI: n = 43, M_{age} = 75.9±6.1) completed the Everyday Cognition scale, a validated self-report measure of SCD, and the RAND-36 Health Survey, a validated self-report measure of health-related quality of life which includes a mental wellbeing subscale. Spearman's rank correlations were conducted between self-reported mental wellbeing and each self-reported cognitive domain (i.e., memory, language, visuospatial, and executive function) for the Normal Cognition and MCI groups.

Results: Worse mental wellbeing was associated with worse subjective language and executive function in the normal group, $r_s(56)$ = -.42, p =.001; $r_s(56)$ = -.37, p =.005, but not for the MCI group, $r_s(41)$ = -.23, p =.15; $r_s(41)$ = -.12, p =.46. Worse mental wellbeing was associated with worse subjective visuospatial function in the MCI group, $r_s(41)$ = -.39, p =.009, but not in the normal group, $r_s(56)$ = -.11, p =.39. For both groups, worse mental wellbeing was associated with worse subjective memory, $r_s(56)$ = -.45, p < .001; $r_s(41)$ = -.37, p =.02. While this correlation was greater in the normal group, the difference was not significant (z = 0.38, p =.71).

Conclusions: These results suggest that perceptions of mental wellbeing are related to perceptions of cognitive decline in multiple domains, and that the specific domains involved differ between normal and MCI groups. The differential associations may mean perception of specific cognitive domains more strongly affect mental wellbeing, or mental wellbeing more acutely influences perception of those domains. The overall observed relationship between SCD and mental wellbeing may have several explanations: the impact of broader health perceptions may extend to cognitive perception, behavioral changes associated with poor wellbeing may reduce subjective cognitive function, or worse subjective cognitive function may lead to negative experiences of wellbeing. Future longitudinal investigation could inform causal inferences. The more limited associations between mental wellbeing and SCD among MCI individuals may point to the role of decreased self-awareness (due to cognitive impairment) precluding detection of subtle changes in cognition or wellbeing. This study highlights the importance of better understanding mental wellbeing in experiences of SCD in both normal and MCI older adults to improve cognitive and mental health outcomes.

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35 Impact of Cardiorespiratory Fitness and White Matter Lesions on Processing Speed with Age

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Objective: Processing speed declines with age and is a strong predictor of age-related cognitive decline in other domains, and in predicting who will need help with tasks of daily living in later years. Higher cardiorespiratory fitness (CRF) reflects better cardiopulmonary health and is related to maintenance of processing speed and cognition into late life. On the other hand, white matter lesions (WML) are reflective of age-related brain network disconnections from damage to white matter tracts in the brain. Lower CRF and higher WML burden have each been related to poorer cognitive performance. Although higher CRF provides a protective effect on cognition, the combined effects of CRF and WML on processing speed have yet to be determined. Specifically, whether CRF and WML independently affect processing speed or if WML moderates the effect of CRF on processing speed is yet to be established. We predicted WML may moderate CRF benefits on cognitive aging if CRF-related cognitive benefits are weakened by high WML load. Here, we test this question with the gold-standard measure of CRF, maximal exercise oxygen uptake (relative VO2 max, mL/kg/min) during a graded exercise test, and a validated neuropsychological