

INTRODUCTION

Older adults generally perform worse than younger adults on tests of episodic long-term memory, but show preserved performance on tests of semantic memory. Episodic-memory tasks (e.g., recall, recognition), however, are generally more difficult than semantic-memory tasks (e.g., lexical decision, semantic categorization). Therefore, accuracy has served as the primary performance index in the episodic-memory literature, whereas reaction time (RT) has typically served as the performance index in the semantic-memory literature. As a result, the direct comparison of age-related changes in episodic and semantic memory is difficult.

There were two goals in this experiment. First, we sought to compare age differences in RT measures of episodic and semantic memory retrieval, for tasks with a similar structure and overall level of difficulty. Secondly, we examined whether age-related reaction time differences in episodic and semantic retrieval tasks could be explained on the basis of perceptual-motor slowing. To this end, we tested younger and older adults on old-new episodic retrieval, semantic categorization, and perceptual-motor tasks. If aging differentially impairs episodic memory retrieval, then an age-related slowing should remain in the RT measure of retrieval for the episodic task, but not for the semantic task, once perceptual-motor speed is controlled statistically.

METHOD

Participants

❖ 24 younger adults (mean age 19 yrs, range 18-22 yrs) and 24 older adults (mean age 71 yrs, range 66-84 yrs)

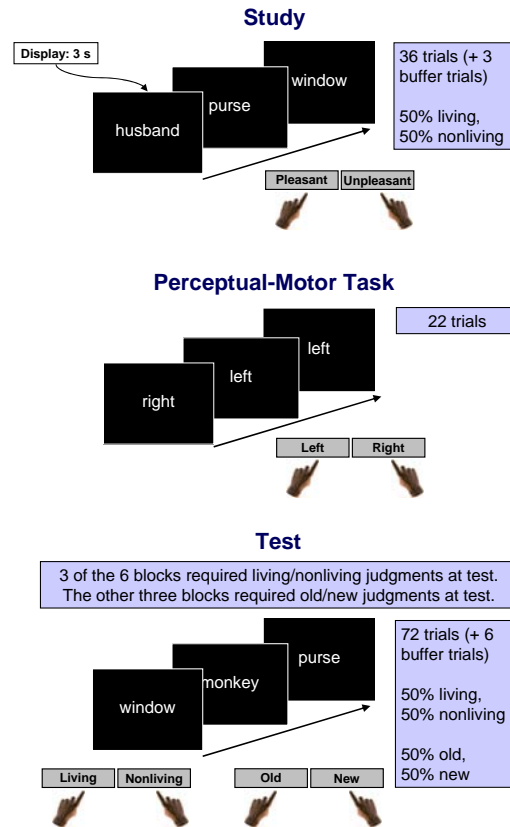
Materials

❖ 468 nouns; half living, half nonliving; word length: mean 6 letters (range 4-9 letters); Kucera-Francis word frequency: median 25 (range 10-849)

Procedure

❖ 3 episodic study-test blocks, 3 semantic study-test blocks

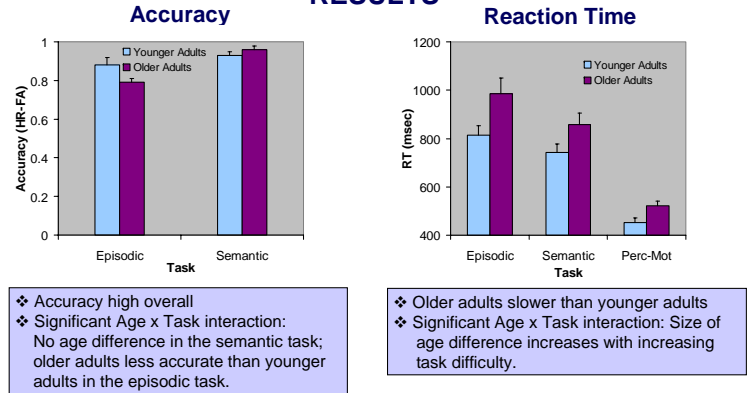
BLOCK DESIGN



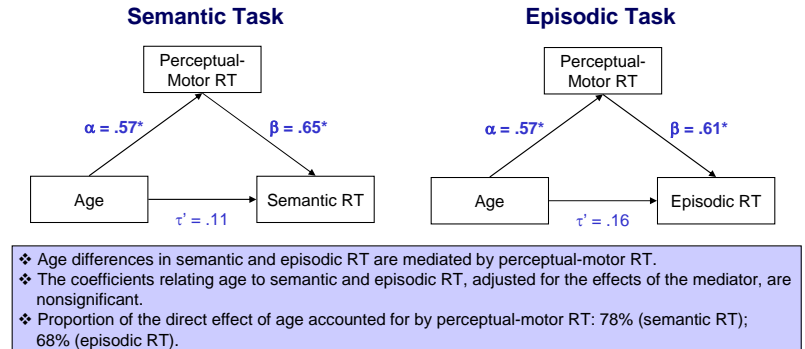
CONCLUSIONS

❖ Older adults' responses on both long-term memory tasks were slowed compared to younger adults'. This age difference was greater for episodic retrieval than for semantic retrieval.

RESULTS



Age Differences in Retrieval Speed Mediated by Perceptual-Motor Speed



❖ The age differences in retrieval time were mediated by perceptual-motor speed; mediation effects were similar for semantic and episodic retrieval.

❖ This finding does not support the notion of a domain-specific age deficit in retrieval from episodic memory. It is possible that such a deficit would emerge under conditions that more strongly emphasize recollective, rather than familiarity-based, retrieval processes.