

BRIEF REPORT

The present study examined the effects of initial curiosity and interest on memory for answers to trivia questions. Younger and older adults were presented with a range of trivia questions (the topics were not specifically more relevant to any one age group) and examined memory for the answers to the trivia questions. Importantly, the current study distinguished between the initial level of wanting to know the answer to a question (“initial”

guessed correctly were noted in order to exclude these from later analyses.

After the trivia question presentation, participants engaged in other unrelated cognitive tasks for approximately 60 min ($SD = 12.5$). Participants were then given a surprise cued-recall test on half of the questions (short-delay test). Thirty questions were randomly selected and presented in a fixed random order. At test, participants were shown the questions one at a time, and asked to try and recall the answer. Participants were given as much time as needed to answer. If participants indicated they did not know the answer or if they guessed incorrectly, they were told the correct answer. Participants were then contacted again approximately 1 week later by phone, and were tested on the other half of the questions (long-delay test). The assignment of the trivia questions to shorter and longer delay conditions were counterbalanced between participants. During the long-delay test, questions were read aloud to the participant.

In order to only examine new learning, items that participants already knew were excluded from analyses. Older adults knew significantly more answers compared with younger adults ($M = 6.5$ questions, $SD = 3.6$ and $M = 3.6$, $SD = 2.6$, respectively), $t(46) = 3.15, p < .01$. A series of preliminary regression analyses with age group and education level as the independent variables showed that none of the main variables (curiosity, confidence, postanswer interest, JOLs, memory performance at both the short-delay and long-delay, and the initial correct answer to trivia questions) was significantly related to participants' education levels ($ps > .05$).

To examine cued recall memory performance for the answers to the questions, a mixed 2 (Age Group: younger adults vs. older adults) \times 2 (Time Interval: short-delay test vs. long-delay test) analysis of variance (ANOVA) was conducted, and revealed neither a significant main effect of age, $F(1, 46) = .02, p = .89, \eta^2_G = .00$, nor an interaction between age group and time interval, $F(1, 46) = 2.03, p = .16, \eta^2_G = .01$. Younger and older adults demonstrated comparable memory performance at both the short-delay test ($M = 86.6\%$, $SD = 7.7\%$ and $M = 89.1\%$, $SD = 11.9\%$, respectively) and long-delay tests ($M = 51.8\%$, $SD = 12.8\%$ and $M = 50.1\%$, $SD = 11.8\%$, respectively), all $ps > .39$. A significant main effect of time interval was observed, $F(1, 46) = 620.50, p < .01, \eta^2_G = .74$, indicating that memory performance declined after the week delay.

T tests were conducted to examine whether older or younger adults gave higher or lower average ratings of curiosity, confidence, interest, or JOLs. Older adult had slightly higher average curiosity ratings compared with younger adults ($M = 6.5$, $SD = 1.6$ and $M = 5.6$, $SD = 1.4$, respectively), $t(46) = 2.28, p < .05, d = 0.66$, confidence ratings ($M = 2.6$, $SD = 1.3$ and $M = 1.8$, $SD = 0.6$, respectively), $t(46) = 2.63, p < .05, d = 0.76$, and JOLs ($M = 6.1$, $SD = 1.8$ and $M = 5.0$, $SD = 1.6$, respectively), $t(46) =$

$2.35, p < .05, d = 0.68$. Older adults also had higher postanswer interest ratings compared with younger adults, although the difference was only marginally significant ($M = 5.8$, $SD = 1.8$ and $M = 5.0$, $SD = 1.2$, respectively), $t(46) = 1.90, p = .06, d = 0.55$.

Correlation matrices for both younger and older adults are displayed in Table 1. The correlation matrices represent within-person correlations; specifically, considering the nested structure of the data (i.e., item-level ratings are nested within participants), we computed item-level correlations after controlling for between person variations based on Kenny and La Voie (1985). All of the self-reported ratings were positively correlated, indicating that curiosity, confidence, postanswer interest, and JOLs have some shared variance. Memory accuracy was also significantly correlated with most of these self-reported indices. The overall pattern of the correlations was similar across the age groups. We also computed the correlation between memory performance and ratings at between-person level (i.e., correlation of mean ratings/performance of individuals). None of the correlations were statistically significant for either age group ($ps > .15$). Memory at short delay and long delay was positively correlated for both younger, $r = .67, p < .01$ and older, $r = .58, p < .01$ adults.

To further examine the within-person relations between curiosity, confidence, postanswer interest, JOL, and memory, we conducted mixed-effects modeling analysis using trials as the unit of analysis (Baayen, Davidson, & Bates, 2008; Murayama, Sakaki, Yan, & Smith, 2014; for recent applications in aging research, see Castel, Murayama, Friedman, McGillivray, & Link, 2013; Hines, Touron, & Hertzog, 2009; Middlebrooks, McGillivray, Murayama, & Castel, in press). This analysis allows for the assessment of the independent predictive effects of each of the variables on the dependent variable at a within-person level—this point is especially important given that all the ratings were positively correlated.

We first examined the extent to which curiosity and postanswer difference contributed to participants' JOLs. For that purpose, we

Table 1
Correlations Between Ratings for Younger and Older Adults

	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

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Question	Answer
What is the slowest swimming fish in the world?	Seahorse
What mammal sleeps the shortest amount each day?	Giraffe
What city has the shortest name in the world?	Y (France)
Who was the first person to use the V sign as a victory sign?	Winston Churchill
What is the only planet in our solar system that rotates clockwise?	Venus
What is the only consumable food that won't spoil?	Honey
What product is second, only to oil, in terms of the largest trade volumes in the world?	Coffee
What is most common first name in the world?	Mohammed
What country has the highest population density?	Monaco
What fish produces more than 200 million eggs at a time?	Sunfish
What handicap did Thomas Edison suffer from?	Deafness
What snack food can be used as an ingredient in the explosive dynamite?	Peanuts
What was the first animated film to be nominated for an Oscar for best picture?	
