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Age Differences in the Effective Monitoring and Regulating of Source Memory

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Introduction

A number of studies show age differences in *source memory* (see e.g., #1, 2, 5). However, few studies examine age differences in *monitoring accuracy* for such tasks. The current study uses a paradigm inspired by Koriat and Goldsmith (1996) and Kelley and Sahakyan (2003) to examine age differences in monitoring accuracy for a source memory task when overall accuracy is matched between younger and older adults. This study also examines how differences in monitoring accuracy bear on the ability to regulate overall accuracy when the option to withhold responses is given.

Method and Results

Older adults (OA), younger adults (YA), and older adults who were matched on source accuracy with younger adults (O-M) were presented sentences spoken by one of two speakers: one male and one female. At test, participants were asked to identify the source of each item as male, female, or as new. Following each response, participants were asked to give a confidence judgment and were given the choice of either submitting or withholding their answer. Source accuracy is shown in Table 1. OA were worse than YA in making source judgments, while no differences were found between O-M and YA. However, while YA were able to significantly improve their source accuracy by withholding responses, OA and O-M were not.

Table 1: Source accuracy in forced and free testing conditions

	OA	YA	O-M
FORCED	0.66	0.79	0.76
FREE	0.68	0.85	0.78

Table 2: Monitoring Accuracy

	OA	YA	O-M
Calibration	0.17	0.10	0.15
Gamma	0.03	0.58	0.45

Monitoring accuracy data are shown in Table 2. OA and O-M were significantly worse at monitoring the accuracy of their responses compared to YA. We hypothesized that older adults' diminished monitoring ability was due to *misrecollections*. We tested this hypothesis by completing

an analysis in which old items for which high confidence source misattributions occurred were removed. The results are shown in Table 3. Removing misrecollections resulted in no monitoring differences between YA and O-M.

Table 3: Adjusted Monitoring Accuracy

	YA	O-M
Calibration	0.11	0.09
Gamma	0.66	0.67
# Misrecollections	2.61	6.44

Discussion

OA were found to be less accurate in making source memory judgments than YA. Furthermore, even when older participants were matched with YA on source accuracy, they showed an impaired ability to accurately monitor their responses. This impairment was due to a large number of misrecollections, and when these items were removed from the analysis, no differences were found in monitoring accuracy. OA and O-M were also unable to effectively withhold responses to improve their source accuracy scores, compared to YA. This was due to two factors: older participants' impaired monitoring ability and their use of a lax criterion in making submit-withhold decisions.

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