

# Erratum

## Erratum: Crestol et al., “Menopause status and within-group differences in chronological age affect the functional neural correlates of spatial context memory in middle-aged females”

In the article, “Menopause status and within-group differences in chronological age affect the functional neural correlates of spatial context memory in middle-aged females,” by Arielle Crestol, Sricharana Rajagopal, Rikki Lissaman, Annalise A. LaPlume, Stamatoula Pasvanis, Rosanna K. Olsen, Gillian Einstein, Emily G. Jacobs, and M. Natasha Rajah, which appeared on pages 8756–8768 of the December 13, 2023 issue, the datamat creation for the fMRI data subset was erroneously sampled. The authors note the following:

“The PLS datamats (i.e., onset timing files) for 16 Pre-Meno and 6 Post-Meno females contained some shifted event onsets. To correct this unintentional error, we corrected the datamats for these participants and rerun the B-PLS analysis. In the rerun analysis, the sign of the PLS solution flipped. Such sign flips are an arbitrary result of the resampling with permutation and bootstrapping and do not affect the interpretation of the results given that the direction of the relationship between brain–behavior correlations and singular image remain the same (McIntosh and Lobaugh, 2004, pg. S252).

“The updated analysis reveals the same contrast effects at comparable percentage cross-block covariance in LV1 (15.74% cross-block covariance accounted for) and LV2 (10.54% cross-block covariance accounted for), and both LVs are significant at  $p < 0.01$ . For LV 1 ( $p = 0.001$ ), the brain–behavior correlation profile was generally the same in Pre-Meno females. In Post-Meno females, the patterns of correlations related to age, spatial context retrieval accuracy, and recognition accuracy effects previously observed in EncEasy are now observed in EncHard. As such on page 26, line 601 should refer to EncHard and state, “...at higher levels of task demands.” In addition, previously the activation peaks reported in Table 2 and in Figure 3 for lateral PFC extended both dorsally and ventrally, and the peak in the inferior parietal cortex (IPC) was primarily in the angular gyrus, BA 39. Now, the lateral PFC extends ventrally, and the IPC activation includes angular gyrus, BA 39, and extends to BA 19 and IPC BA 40. In addition, both positive and negative saliences are now observable. Importantly, the main effects reported originally in positive saliences and the general conclusions for LV1 remain unchanged.

“LV 2 ( $p = 0.006$ ) had the same brain–behavior correlation profile as Post-Meno females. However, LV2 did not have a strong representation from Pre-Meno females as before. The activation peaks reported in Table 3 and in Figure 4 are slightly changed, with both positive and negative saliences now being above the threshold. As a result, the main effect no longer includes IPC but remains for the parahippocampal gyrus and occipitotemporal cortex. Despite these changes, the conclusions for LV2 did not change. Finally, in this reanalysis, LV3 and LV10 have  $p = 0.047$ , 8.38% cross-block covariance (previously  $p = 0.072$ , 8.88% cross-block covariance), and  $p = 0.038$ , 4.29% cross-block covariance (previously  $p = 0.069$ , 3.95% cross-block covariance), respectively. However, given the low  $p$ - and cross-block covariance values for these two LVs, they do not contribute significantly to the results. Below we present the corrected Tables 2 and 3 and updated Figures 3 and 4.

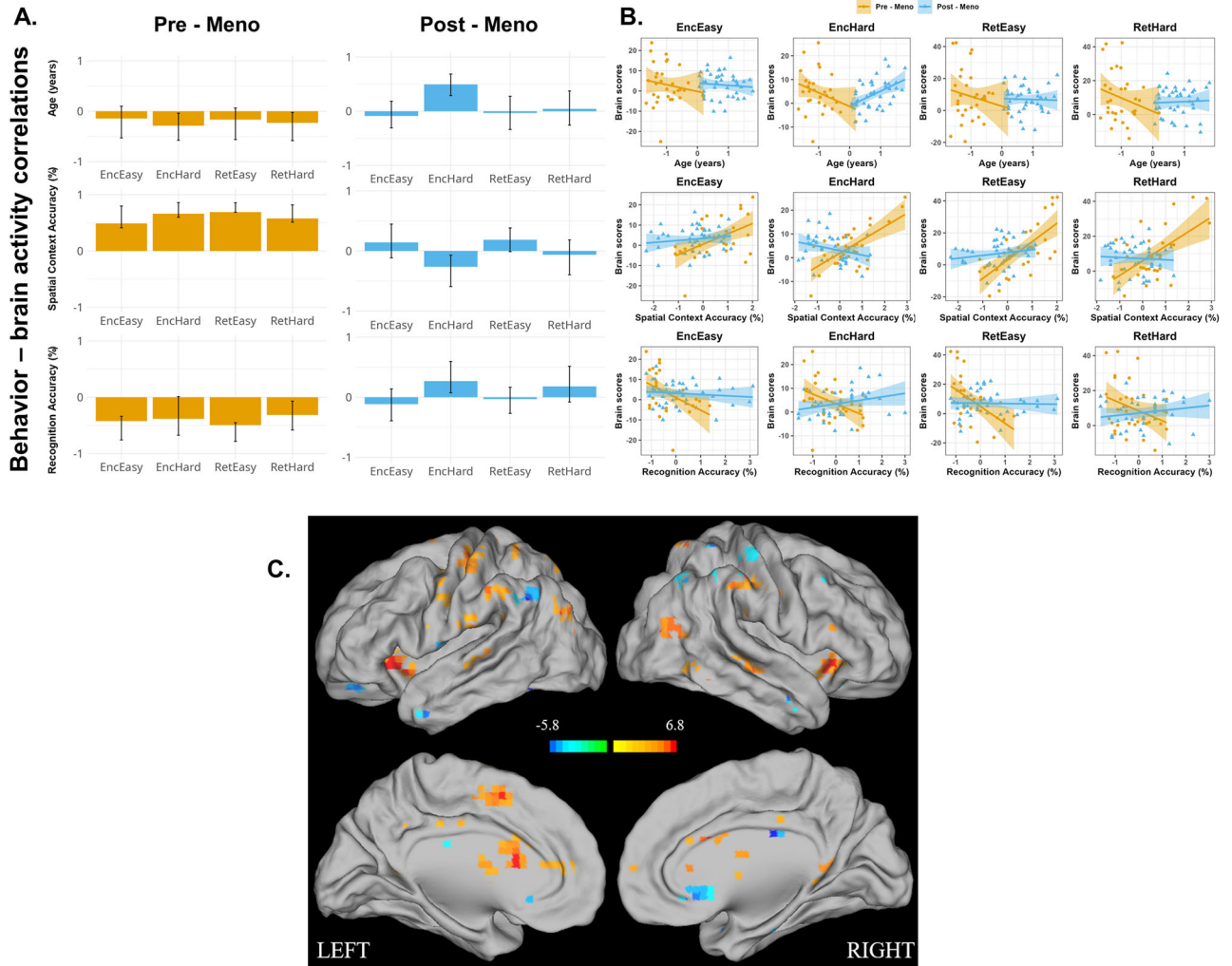
“In conclusion, reanalysis of the data does not change the main conclusions of the published study.”

The corrected Figures 3 and 4, as well as Tables 2 and 3, appear below, and the article has been corrected online. These errors do not affect the conclusions of the paper, and the online version has been corrected to account for the shifted event onsets and subsequent reanalyses.

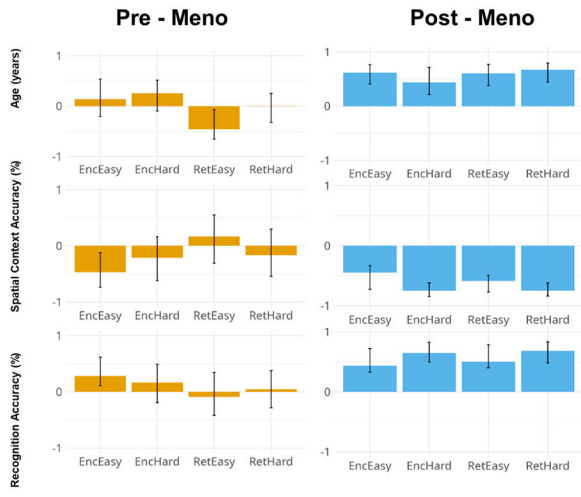
### Reference

McIntosh AR, Lobaugh NJ (2004) Partial least squares analysis of neuroimaging data: applications and advances. *Neuroimage* 23:S250–S263.

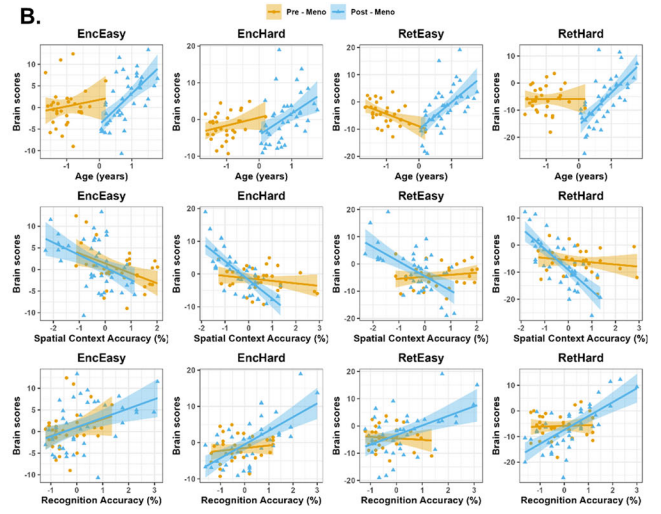
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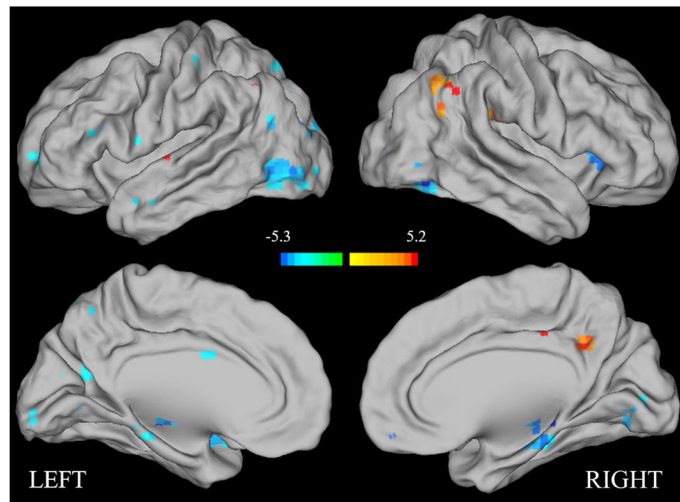
**A. Behavior – brain activity correlations**



**B.**



**C.**



**Table 2. Local maxima of negative and positive saliences identified in LV 1**

Temporal lag	BSR	Cluster size	Talairach coordinates			Gyral location	BA
			x	y	z		
<b>Negative saliences</b>							
<i>Left hemisphere</i>							
4	−4.20	12	−49	−6	7	Superior temporal gyrus	22
5	−4.36	10	−53	−57	30	Supramarginal gyrus	40
<i>Right hemisphere</i>							
5	−5.76	22	35	−49	58	Superior parietal lobule	7
5	−5.27	30	7	21	−1	Caudate head	
<b>Positive saliences</b>							
<i>Left hemisphere</i>							
3	6.74	56	−42	−79	21	Angular gyrus, middle temporal gyrus	39,19
3, 5	5.35	22	−9	1	51	Medial/superior frontal gyrus	6
3	5.28	138	−64	−21	16	Postcentral gyrus	43,40
3	5.19	16	−17	−8	68	Superior frontal gyrus	6
3	4.98	50	−35	−52	56	Inferior/superior parietal lobule	40, 7
3	4.94	35	−64	−34	32	Inferior parietal lobule	40
3	4.62	17	−9	−3	15	Caudate body	
3	4.49	11	−13	−74	48	Precuneus	7
3	4.42	13	−61	−55	9	Middle temporal gyrus	21, 37
3	4.36	10	−23	12	19	Clastrum, inferior frontal gyrus	44
3	4.16	15	−45	22	−2	Inferior frontal gyrus	47
3	4.09	13	−5	22	31	Cingulate gyrus	32, 24
3	3.80	17	−5	38	19	Anterior cingulate	32
4	5.09	29	−1	11	27	Cingulate gyrus	24
4	3.84	10	−32	−60	59	Superior parietal lobule	7
5	5.70	62	−27	14	2	Putamen	
5	4.44	29	−35	−25	55	Postcentral gyrus	2,1
<i>Right hemisphere</i>							
3	6.08	30	43	−63	13	Middle temporal gyrus	19, 39
3	5.10	34	17	−50	32	Precuneus	31
3	4.97	40	50	−13	36	Precentral gyrus	6
3	4.73	56	40	−39	−6	Fusiform gyrus extends into the middle temporal	37
3, 4	5.49	49	21	22	25	Anterior cingulate	32
3	4.36	11	39	−19	28	Postcentral gyrus	3,4
3	3.82	14	10	−3	19	Caudate body	
5	5.24	47	29	17	−1	Clastrum, inferior frontal gyrus	47

**Table 3. Local maxima of negative and positive saliences identified in LV 2**

Temporal lag	BSR	Cluster size	Talairach coordinates			Gyral location	BA
			x	y	z		
<b>Negative saliences</b>							
<i>Left hemisphere</i>							
3, 4, 5	−4.58	48	−38	−68	−6	Inferior occipital gyrus extends into fusiform gyrus BA19	19
3	−4.54	23	−27	−85	10	Middle occipital gyrus	18, 19
3	−4.32	24	−16	−15	−12	Parahippocampal gyrus	28
3	−4.18	10	−53	27	20	Middle/inferior frontal gyrus	45, 46
4	−5.22	31	−23	−23	−6	Parahippocampal gyrus	28
5	−4.83	17	−24	18	34	Middle frontal gyrus	8
5	−4.11	22	−16	−65	−2	Lingual gyrus	18, 19
5	−3.89	10	−12	−87	−4	Lingual gyrus	18
<i>Right hemisphere</i>							
3	−4.62	16	40	−65	−8	Fusiform gyrus	19, 37
3	−4.61	31	36	−30	−12	Parahippocampal gyrus, fusiform gyrus	36, 20
5	−4.31	12	29	24	7	Inferior frontal gyrus	47
<b>Positive saliences</b>							
<i>Right hemisphere</i>							
3	5.18	14	10	−49	29	Precuneus	31
3	5.15	31	39	−26	24	Insula	13
3, 4	4.33	17	43	−62	39	Angular gyrus/inferior parietal lobule	39, 40