Supplementary Material

Yoga Prevents Gray Matter Atrophy in Women at Risk for Alzheimer's Disease: A Randomized Controlled Trial

Supplementary Table 1. Participant demographics, clinical, and memory scores at baseline (means and standard deviations)

Variable	**Yoga**		**Memory training**		**Kruskal-Wallis test**
	Mean	Standard deviation	Mean	Standard deviation	Statistic (p)
Demographics and clinical scores					
Age	60.9	6.66	64.0	6.48	1.26 (0.26)
Education	15.7	2.06	16.1	1.66	0.12 (0.73)
Body mass index	27.61	7.29	25.91	7.18	0.16 (0.69)
Anxiety	5.3	2.79	5.2	3.97	0.41 (0.52)
Depression	8.2	5.33	8.2	5.9	<0.0001 (1.0)
Resilience	72.3	13.71	72.9	16.2	<0.0001 (1.0)
Perceived Stress	22.7	2.95	21.8	3.58	0.1 (0.75)
Memory Function Questionnaire					
Frequency of Forgetting	4.12	1.21	4.7	1.02	1.48 (0.22)
Seriousness of Forgetting	3.84	1.31	4.33	1.23	1.11 (0.29)
Gray matter volume					
Estimated total intracranial volume	61.54	6.58	64.55	6.41	0.13 (0.72)
Left hippocampus	3623.2	453.22	3580.97	291.93	0.03 (0.87)
Right hippocampus	3769.31	427.23	3658.77	326.94	0.31 (0.58)
Left amygdala	1256.45	138.62	1297.16	94.53	0.79 (0.38)
Right amygdala	1480.94	132.44	1469.11	151.12	0.05 (0.82)

Neither demographics and clinical, nor region of interest-based gray matter volume differed between the groups at baseline (p-values in parentheses).

Supplementary Table 2. Within-group differences in gray matter volume change (means and standard deviations)

Variable	Yoga		Memory training	
	Mean change (standard deviation)	Signed rank test statistic (p)	Mean change (standard deviation)	Signed rank test statistic (p)
Clusters				
Left middle temporal	0.72 (2.8)	3.0 (0.83)	-7.51 (6.87)	-29.0 (0.007**)
Left supramarginal	-0.25 (2.43)	-6.0 (0.64)	-7.15 (6.06)	-30.0 (0.005**)
Left precentral	2.45 (4.53)	23.0 (0.04*)	-6.06 (6.07)	-26.0 (0.02*)
Left superior frontal	0.79 (2.81)	7.0 (0.58)	-5.12 (6.28)	-26.0 (0.02*)
Left lateral occipital	3.84 (3.83)	28.0 (0.01*)	-6.56 (6.59)	-30.0 (0.005**)
Right postcentral	1.48 (4.38)	10.0 (0.41)	-7.47 (9.81)	-28.0 (0.01*)
Right precuneus	2.99 (4.96)	18.0 (0.12)	-5.11 (5.9)	-25.0 (0.02*)
Right precentral	1.7 (4.49)	15.0 (0.21)	-5.36 (5.62)	-29.0 (0.007**)
Right inferior parietal	2.16 (3.86)	17.0 (0.15)	-5.28 (5.69)	-27.0 (0.01*)
Right superior temporal	0.9 (3.09)	12.0 (0.32)	-6.0 (6.42)	-30.0 (0.005**)
Right paracentral	1.19 (4.26)	8.0 (0.52)	-7.62 (7.61)	-28.0 (0.01*)
Regions of Interest				
Left hippocampus	18.92 (69.19)	11.0 (0.37)	-4.5 (40.22)	-8.0 (0.52)
Right hippocampus	27.61 (36.6)	24.0 (0.03*)	-22.24 (54.6)	-15.0 (0.20)
Left amygdala	-3.54 (45.69)	-6.0 (0.63)	4.02 (34.97)	12.0 (0.32)
Right amygdala	15.91 (48.43)	9.0 (0.46)	3.25 (67.38)	-2.0 (0.90)

Cluster and region of interest changes in gray matter volume within the yoga and the memory enhancement training groups.
*p<0.05; **p<0.01