

Supplementary Table 1. Functional connectivity differences between the acupuncture group and the sham acupuncture group controlled by age, gender, education level and head motion

FC Variables	Acupuncture group [post-pre] (95% CI)	Sham acupuncture group [post-pre] (95% CI)	<i>P</i> value (group × time)	<i>F</i> value	df	Partial eta squared (η^2)
vFC.L and Thalamus.L	-0.135 (-0.210, -0.060)	0.099 (0.006, 0.193)	0.000*	16.267	59	0.216
Precentral gyrus.R and PCC.L	-0.200 (-0.304, -0.096)	0.085 (-0.031, 0.202)	0.000*	13.839	59	0.190
Middle insula.L and PCC.L	-0.095 (-0.183, -0.006)	0.128 (0.037, 0.218)	0.001*	11.328	59	0.161
Precentral gyrus.L and Parietal.R	0.194 (0.117, 0.272)	-0.071 (-0.189, 0.047)	0.000*	14.081	59	0.193
Parietal.L and Parietal.R	0.105 (-0.014, 0.224)	-0.165 (-0.275, -0.055)	0.001*	11.100	59	0.158

Abbreviations: FC, Functional connectivity; vFC, ventral frontal cortex. PCC, post cingulate cortex. L, left. R, right. * Marks the significant group × timeinteraction effect, $P < 0.01$.

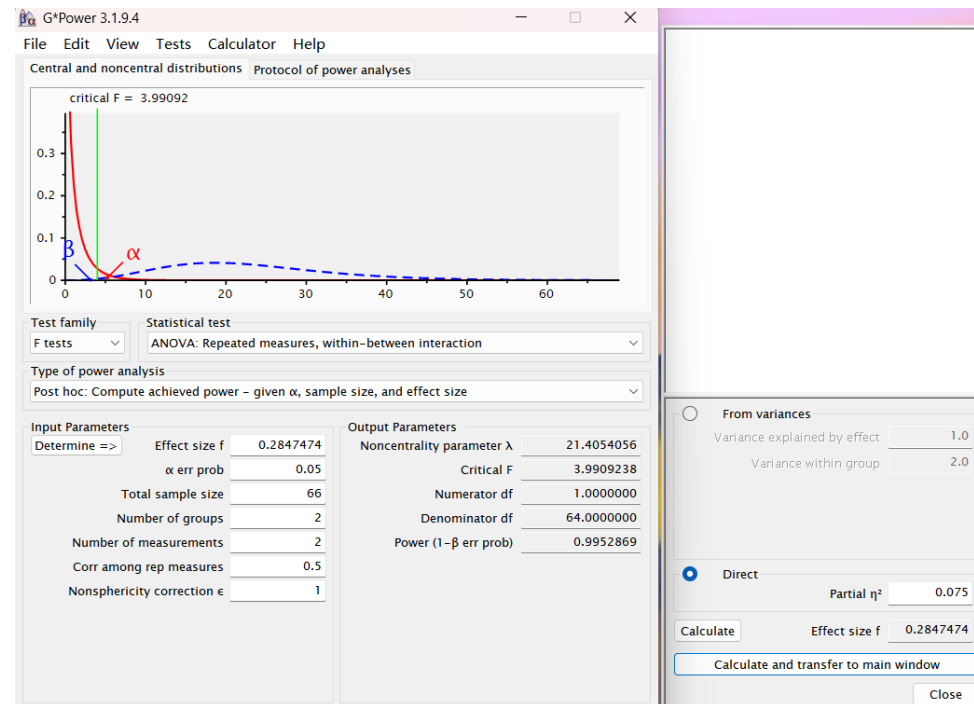
Supplementary Table 2. Results of the ANCOVA analysis

FC Variables	<i>F</i> value	<i>P</i> value	Partial η^2
vFC.L and Thalamus.L	10.439	.002*	.142
Precentral gyrus.R and PCC.L	5.359	.023*	.078
Precentral gyrus.L and Parietal.R	5.164	.026*	.076

Abbreviations: FC, Functional connectivity; vFC, ventral frontal cortex. PCC, post cingulate cortex. L, left. R, right. * Marks the significant effect, $P < 0.05$.

Post-hoc power analysis

To further verify the statistical power in this study, we conducted a post-hoc power analysis based on the effect size of the improvement in the AVLT. The G*Power version 3.1.9.7 software was used. Firstly, based on the statistical value (partial $\eta^2 = 0.075$) obtained from the repeated-measures general linear model, with a type I error probability of 0.05 and a total sample size of 66 cases (divided into 2 groups), the power was found to be 99.5%.



Supplementary Fig. 1. Post-hoc power analysis result

Supplementary Table 3. The topological properties of the 9 ROIs before and after treatment

	Nodal Efficiency AUC				Betweenness AUC			
	Before AG	After AG	Before SG	After SG	Before AG	After AG	Before SG	After SG
	(mean, SD)	(mean, SD)	(mean, SD)	(mean, SD)	(mean, SD)	(mean, SD)	(mean, SD)	(mean, SD)
vFC.L	0.096, 0.016	0.097, 0.015	0.097, 0.016	0.095, 0.012	53.28, 22.06	46.35, 26.30	58.31, 16.88	58.38, 22.98
Precentral.gyrus.R	0.105, 0.019	0.107, 0.016	0.110, 0.018	0.107, 0.014	39.73, 20.30	36.65, 18.01	37.67, 21.64	32.90, 16.56
Middle.insula.L	0.097, 0.017	0.095, 0.018	0.099, 0.017	0.094, 0.015	41.40, 16.80	40.90, 14.22	42.44, 20.65	42.40, 19.88
Precentral.gyrus.L	0.098, 0.015	0.099, 0.019	0.104, 0.019	0.098, 0.016	44.96, 19.65	43.92, 24.41	36.27, 15.20	46.85, 26.18
Thalamus.L	0.085, 0.016	0.087, 0.017	0.088, 0.014	0.083, 0.020	45.97, 23.77	37.83, 18.45	35.42, 15.29	41.44, 22.98
Parietal.L	0.105, 0.021	0.112, 0.019	0.112, 0.020	0.105, 0.019	32.05, 20.79	26.11, 22.98	26.09, 15.04	27.77, 17.36
Parietal.R	0.102, 0.026	0.107, 0.019	0.109, 0.022	0.103, 0.016	30.92, 28.75	27.63, 13.55	29.84, 16.33	28.22, 13.04
Parietal.R	0.101, 0.019	0.102, 0.020	0.102, 0.023	0.096, 0.019	34.02, 19.18	31.55, 14.95	27.20, 12.91	40.91, 21.11
PCC.L	0.069, 0.029	0.072, 0.022	0.082, 0.018	0.076, 0.022	30.50, 23.33	24.10, 15.55	33.41, 27.31	28.32, 18.24

Abbreviations: vFC, ventral frontal cortex. PCC, post cingulate cortex. L, left. R, right.

Supplementary Table 4. The topological properties change between the acupuncture group and the sham acupuncture group controlled by age, gender, education

level and head motion						
	Acupuncture group [post-pre] (95% CI)	Sham acupuncture group [post-pre] (95% CI)	<i>P</i> value (group × time)	<i>F</i> value	df	Partial eta squared (η^2)
Nodal efficiency of Parietal.L	0.007 (-0.001, 0.015)	-0.006 (-0.013, -0.000)	0.014*	6.432	59	0.098
Betweenness of Parietal.R	-2.469 (-9.160, 4.222)	13.706 (6.167, 21.245)	0.002*	10.310	59	0.149

Abbreviations: L, left. R, right. * Marks the significant effect, $P < 0.05$.

Supplementary Table 5. Head motion in each direction in each group before and after treatment

	mean(abs(Tx))	mean(abs(Ty))	mean(abs(Tz))	mean(abs(Rx))	mean(abs(Ry))	mean(abs(Rz))
Acupunctrue (pre-intervention)	0.104	0.132	0.241	0.352	0.160	0.125
Acupunctrue (post-intervention)	0.132	0.146	0.276	0.373	0.161	0.184
Sham Acupunctrue (pre-intervention)	0.169	0.170	0.269	0.331	0.150	0.179
Sham Acupunctrue (post-intervention)	0.140	0.156	0.288	0.427	0.158	0.184