

**Appendix 1** to Wang L, Yin Y, Feng W, et al. Childhood trauma and cognitive deficits in schizophrenia patients: mediation by orbitofrontal cortex H-shaped sulci volume. *J Psychiatry Neurosci* 2022. doi: 10.1503/jpn.210178. Copyright © 2022 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at cmajgroup@cmaj.ca. Online appendices are unedited and posted as supplied by the authors.

**Supplemental Table S1. Multivariate linear regression analysis for association between childhood trauma and left OFC H-shaped sulci volume for PFES**

Variable	PFES		HC	
	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
Emotional abuse	1.66	0.103	-1.284	0.146
Physical abuse	-1.01	0.320	0.84	0.409
Sexual abuse	-1.52	0.134	0.184	0.432
Emotional neglect	-2.16	0.036	-0.32	0.752
Physical neglect	-2.26	0.028	-1.41	0.166
CTQ total score	-2.53	0.014	0.76	0.450

Notes: CTQ, Childhood Trauma Questionnaire; MCCB, MATRICS Consensus Cognitive Battery; OFC, orbitofrontal cortex; PFES, patients with first-episode schizophrenia; HC, Healthy Controls.

**Supplemental Table S2. Multivariate linear regression analysis for association between childhood trauma and right OFC H-shaped sulci volume for PFES**

Variable	PFES		HC	
	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
Emotional abuse	1.46	0.151	0.82	0.416
Physical abuse	2.05	0.046	-0.56	0.577
Sexual abuse	-0.03	0.977	-0.75	0.459
Emotional neglect	-0.35	0.727	-0.49	0.631
Physical neglect	-1.44	0.155	-0.16	0.875
CTQ total score	-1.60	0.116	-0.31	0.757

Notes: CTQ, Childhood Trauma Questionnaire; MCCB, MATRICS Consensus Cognitive Battery; OFC, orbitofrontal cortex; PFES, patients with first-episode schizophrenia; HC, Healthy Controls.

**Supplemental Table S3. Multivariate linear regression analysis for association between subtypes of childhood trauma and MCCB score**

Dependent	PFES					HC				
	EA	PA	SA	EN	PN	EA	PA	SA	EN	PN
	<i>t</i>	<i>t</i>	<i>t</i>	<i>t</i>	<i>t</i>	<i>t</i>	<i>t</i>	<i>t</i>	<i>t</i>	<i>t</i>
	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>
Speed of Processing	-0.57 0.573	1.66 0.103	-0.87 0.388	-0.86 0.393	-0.72 0.473	-0.36 0.721	1.43 0.160	0.77 0.446	-0.84 0.406	1.71 0.096
Attention/Vigilance	-0.86 0.394	1.58 0.12	-1.60 0.116	-0.97 0.335	-0.71 0.480	1.34 0.189	0.17 0.870	-0.50 0.618	-1.50 0.142	1.54 0.131
Working Memory	-0.47 0.643	1.37 0.176	-2.23 0.030*	-1.88 0.066	0.17 0.865	-1.00 0.339	1.41 0.168	0.18 0.861	-1.00 0.323	2.31 0.027*
Verbal Learning	1.10 0.275	1.30 0.200	-1.20 0.236	-1.96 0.055	0.02 0.983	1.37 0.178	0.59 0.558	0.36 0.724	-0.44 0.666	0.517 0.608
Visual Learning	-0.94 0.349	1.39 0.171	-1.76 0.084	-2.23 0.030*	0.68 0.498	0.74 0.466	-0.28 0.782	0.29 0.775	0.61 0.543	4.49 <0.001**
Reason & Problem Solving	0.14 0.889	0.68 0.497	-1.46 0.152	-1.97 0.054	-1.20 0.235	0.69 0.495	0.44 0.664	0.25 0.805	-2.68 0.011**	0.18 0.860
Social Cognition	0.31 0.760	-0.01 0.991	0.41 0.686	-0.17 0.864	-0.91 0.366	0.55 0.583	0.20 0.843	0.66 0.515	-1.38 0.176	0.58 0.565
MCCB total score	-0.16 0.872	1.90 0.063	-1.97 0.054	-2.49 0.016*	-0.47 0.644	1.24 0.225	1.10 0.279	0.71 0.484	-1.83 0.076	2.59 0.014**

Notes: CTQ, Childhood Trauma Questionnaire; EA, emotional abuse; PA, physical abuse; SA sexual abuse; EN, emotional neglect; PN, physical neglect; MCCB, MATRICS Consensus Cognitive Battery; OFC, orbitofrontal cortex; PFES, patients with first-episode schizophrenia; HC, Healthy Controls. \*nominal significance at  $p < 0.05$ , \*\*false discovery rate corrected significance at  $q < 0.05$ .

**Supplemental Table S4. General linear regression analysis for association between CTQ total score and MCCB score**

Dependent	PFES		HC	
	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
Speed of Processing	-1.33	0.191	1.37	0.179
Attention/Vigilance	-2.13	0.038*	1.17	0.245
Working Memory	-2.56	0.013	0.71	0.058
Verbal Learning	-0.36	0.717	1.95	0.219
Visual Learning	-2.60	0.012**	3.14	0.003**
Reason & Problem Solving	-2.58	0.013**	-1.25	0.219
Social Cognition	-0.12	0.907	0.076	0.940
MCCB total score	-2.44	0.018**	1.86	0.071

Notes: CTQ, Childhood Trauma Questionnaire; MCCB, MATRICS Consensus Cognitive Battery; PFES,

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patients with first-episode schizophrenia; HC, Healthy Controls. \*nominal significance at  $p < 0.05$ , \*\*false discovery rate corrected significance at  $q < 0.05$ .

**Supplemental Table S5. General linear regression analysis for association between left OFC H-shaped sulci volume and MCCB score**

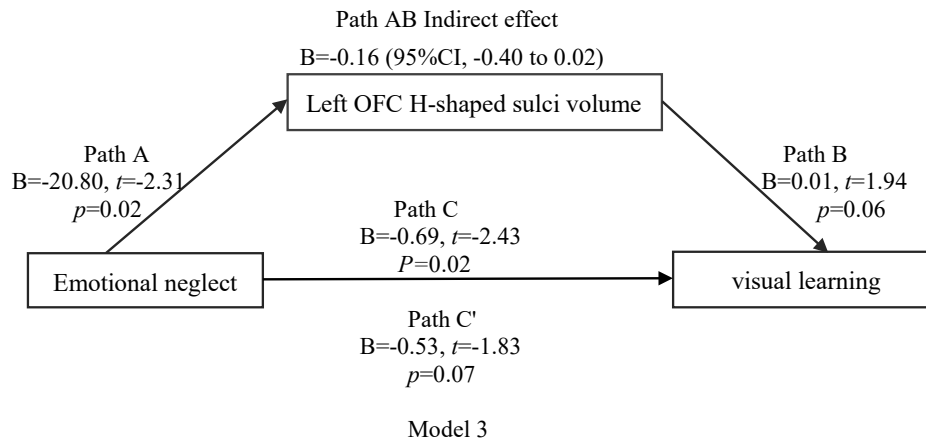
Dependent	PFES		HC	
	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
Speed of Processing	2.54	0.014**	0.29	0.775
Attention/Vigilance	1.82	0.075	0.51	0.614
Working Memory	2.45	0.017**	1.53	0.133
Verbal Learning	1.14	0.260	0.66	0.516
Visual Learning	2.29	0.026*	-0.10	0.919
Reason & Problem Solving	1.23	0.223	1.56	0.126
Social Cognition	1.83	0.072	-0.42	0.417
MCCB total score	3.09	0.003**	0.88	0.387

Notes: CTQ, Childhood Trauma Questionnaire; MCCB, MATRICS Consensus Cognitive Battery; PFES, patients with first-episode schizophrenia; HC, Healthy Controls; OFC, orbitofrontal cortex. \*nominal significance at  $p < 0.05$ , \*\*false discovery rate corrected significance at  $q < 0.05$ .

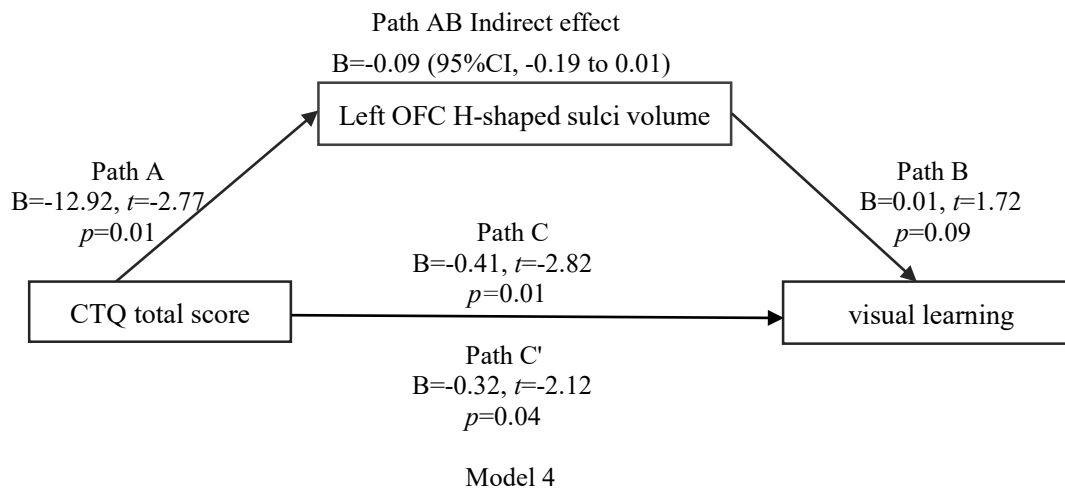
**Supplemental Table S6. General linear regression analysis for association between right H-shaped sulci volume and MCCB score**

Dependent	PFES		HC	
	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
Speed of Processing	1.42	0.161	-0.29	0.775
Attention/Vigilance	0.80	0.425	0.16	0.871
Working Memory	-0.55	0.583	0.40	0.695
Verbal Learning	0.35	0.725	0.397	0.693
Visual Learning	1.75	0.085	0.09	0.929
Reason & Problem Solving	0.46	0.650	1.56	0.126
Social Cognition	1.21	0.233	0.65	0.571
MCCB total score	1.14	0.259	0.71	0.483

Notes: CTQ, Childhood Trauma Questionnaire; MCCB, MATRICS Consensus Cognitive Battery; PFES, patients with first-episode schizophrenia; HC, Healthy Controls; OFC, orbitofrontal cortex.



Supplementary Figure 1 shows Model 3 Path diagram of the mediation model (X = emotional neglect; Y = visual learning; left OFC H-shaped volume as mediators). Path C' and Path C represent the direct and total effect between emotional neglect and left H-shaped sulci volume. Path AB represents the mediation effect, but it is not significant.



Supplementary Figure 2 shows Model 4 Path diagram of the mediation model (X = CTQ total score; Y = visual learning; left OFC H-shaped volume as mediators). Path C' and Path C represent the direct and total effect between emotional neglect and left H-shaped sulci volume. Path AB represents the mediation effect, but it is not significant.