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

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

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.