Contents

[Supplementary table S1 Missing data 2](#_Toc46143182)

[Supplementary table S2 Interaction of PRS-SCZ75 and ES-SCZ75 on case-control status in unimputed data 3](#_Toc46143183)

[Supplementary figure S3 Joint effects of PRS-SCZ75 and ES-SCZ75 on case-control status in unimputed data 4](#_Toc46143184)

[Supplementary table S4 Main and joint effects of PRS-SCZ and ES-SCZ on SIS-R scores in unimputed data 5](#_Toc46143185)

# **Supplementary table S1** Missing data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Casesn = 1699 | Siblingsn = 1753 | Controlsn = 1542 | TotalN = 4994 |
|  | N (%) |
| SIS-R total score | - | 88 (5.0%) | 10 (0.7%) | 98 (3.0%) a |
| SIS-R positive score | - | 35 (2.0%) | 8 (0.5%) | 43 (1.3%) a |
| SIS-R negative score | - | 96 (5.5%) | 13 (0.8%) | 109 (3.3%) a |
| Cannabis use | 158 (9.3%) | 109 (6.2%) | 44 (2.9%) | 311 (6.2%) |
| Bullying | 321 (18.9%) | 320 (18.3%) | 226 (14.7%) | 867 (17.4%) |
| Emotional abuse | 384 (22.6%) | 268 (15.3%) | 91 (5.9%) | 743 (14.9%) |
| Physical abuse | 372 (21.9%) | 248 (14.2%) | 78 (5.1%) | 698 (14.0%) |
| Sexual abuse | 367 (21.6%) | 260 (14.8%) | 89 (5.8%) | 716 (14.3%) |
| Emotional neglect | 384 (22.6%) | 278 (15.9%) | 89 (5.8%) | 751 (15.0%) |
| Physical neglect | 373 (22.0%) | 273 (15.6%) | 84 (5.5%) | 730 (14.6%) |
| Winter birth | 62 (3.7%) | 90 (5.1%) | 32 (2.1%) | 184 (3.7%) |
| Hearing impairment | 102 (6.0%) | 44 (2.5%) | 39 (2.5%) | 185 (3.7%) |
| a percentage within siblings and controls groups (3295 individuals); N: number of observations; SIS-R: The Structured Interview for Schizotypy – Revised. |

# **Supplementary table S2** Interaction of PRS-SCZ75 and ES-SCZ75 on case-control status in unimputed data

|  |  |  |  |
| --- | --- | --- | --- |
|  | PRS-SCZ75 = 0 | PRS-SCZ75 = 1 |  |
|  | N case/control | Odds ratio (95%CI) | N case/control | Odds ratio (95%CI) | RERI (95%CI) |
| ES-SCZ75 = 0 | 216/680 | 1.0 | 164/216 | 2.52 (1.92-3.31)P < 0.001 | 6.64(2.33-10.95)P = 0.003 |
| ES-SCZ75 = 1 | 309/188 | 5.33 (4.14-6.87)P < 0.001 | 233/63 | 13.49 (9.57-19.02) P < 0.001 |
| Adjusted for sex, age and ten principal components; CI: confidence interval; ES-SCZ75:exposome score for schizophrenia (75% cut-point); PRS-SCZ75:polygenic risk score for schizophrenia (75% cut-point); RERI: relative excess risk due to interaction. |

# **Supplementary figure S3** Joint effects of PRS-SCZ75 and ES-SCZ75 on case-control status in unimputed data

Additive effect of the polygenic risk score for schizophrenia, 75% cut-point (PRS-SCZ), and the exposome score for schizophrenia, 75% cut-point (ES-SCZ) on case-control status; adjusted for age, sex and ten principal components; RERI: relative excess risk due to interaction.

**Supplementary table S4** Main and joint effects of PRS-SCZ and ES-SCZ on SIS-R scores in unimputed data

|  |  |  |  |
| --- | --- | --- | --- |
| **Psychopathology measures** | **Main effect PRS-SCZb** | **Main effect ES-SCZ** | **Interactionb** |
| **B** | **95% CI** | ***P-*value** | **B** | **95% CI** | ***P-*value** | **B** | **95% CI** | ***P-*value** |
| Unadjusted |  |  |  |  |  |  |  |  |  |
|  SIS-R total  | 0.011 | 0.006 - 0.015 | <0.001 | 0.091 | 0.079 - 0.102 | <0.001 | 0.005 | 0.002 - 0.008 | 0.001 |
|  SIS-R positive  | 0.012 | 0.007 - 0.018 | <0.001 | 0.101 | 0.087 - 0.116 | <0.001 | 0.004 | 0.000 - 0.008 | 0.027 |
|  SIS-R negative | 0.009 | 0.005 - 0.013 | <0.001 | 0.078 | 0.066 - 0.090 | <0.001 | 0.006 | 0.003 - 0.009 | <0.001 |
| Adjusted**a** |  |  |  |  |  |  |  |  |  |
|  SIS-R total  | 0.011 | 0.006 - 0.015 | <0.001 | 0.091 | 0.080 - 0.103 | <0.001 | 0.005 | 0.002 - 0.008 | 0.001 |
|  SIS-R positive  | 0.012 | 0.007 - 0.018 | <0.001 | 0.102 | 0.087 - 0.117 | <0.001 | 0.004 | 0.001 - 0.008 | 0.024 |
|  SIS-R negative  | 0.009 | 0.005 - 0.014 | <0.001 | 0.079 | 0.066 - 0.091 | <0.001 | 0.006 | 0.003 - 0.009 | <0.001 |

aAdjusted for age and sex, b adjusted for ten principal components; B: regression coefficient from the multilevel model; CI: confidence interval; ES-SCZ: exposome score for schizophrenia; PRS-SCZ: polygenic risk score for schizophrenia; SIS-R: The Structured Interview for Schizotypy – Revised.