# Supplementary material

# Supplementary Table 1: Recruitment by country

|                                       | To   | otal  | Belg | gium  | Cro  | atia  | Fra  | ince  | Geri | many  | Ire  | land  | It   | aly   | Nethe | erlands | ι    | JK    |
|---------------------------------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|---------|------|-------|
|                                       | Exc. | Inc.  | Exc.  | Inc.    | Exc. | Inc.  |
| Assessed for eligibility              |      | 6238  |      | 471   |      | 274   |      | 229   |      | 600   |      | 357   |      | 998   |       | 1180    |      | 2129  |
| Ineligible                            | 2941 |       | 285  |       | 138  |       | 1    |       | 327  |       | 51   |       | 386  |       | 578   |         | 1175 |       |
| Eligible                              |      | 3297  |      | 186   |      | 136   |      | 228   |      | 273   |      | 306   |      | 612   |       | 602     |      | 954   |
| Total not recruited1                  | 2511 |       | 122  |       | 84   |       | 143  |       | 209  |       | 260  |       | 442  |       | 481   |         | 770  |       |
| Study was not introduced <sup>2</sup> | 568  |       | 5    |       | 0    |       | 1    |       | 2    |       | 39   |       | 293  |       | 33    |         | 195  |       |
| Study introduced                      | 906  |       | 51   |       | 25   |       | 118  |       | 81   |       | 174  |       | 52   |       | 252   |         | 153  |       |
| No evidence study introduced          | 1037 |       | 66   |       | 59   |       | 24   |       | 126  |       | 47   |       | 97   |       | 196   |         | 422  |       |
| Recruited                             |      | 786   |      | 64    |      | 52    |      | 85    |      | 64    |      | 46    |      | 170   |       | 121     |      | 184   |
| Withdrew before T1                    | 23   |       | 0    |       | 0    |       | 0    |       | 0    |       | 2    |       | 3    |       | 11    |         | 7    |       |
| Participated in baseline              |      |       |      |       |      |       |      |       |      |       |      |       |      |       |       |         |      |       |
| assessment                            |      | 763   |      | 64    |      | 52    |      | 85    |      | 64    |      | 44    |      | 167   |       | 110     |      | 177   |
| Response rate <sup>3</sup>            |      | 45.7% |      | 55.7% |      | 67.5% |      | 41.9% |      | 44.1% |      | 20.2% |      | 76.3% |       | 30.4%   |      | 53.6% |

Note. Inc. = included; Exc. = excluded. ¹ = total of 'study was not introduced', 'study introduced' and 'no evidence study introduced'. ² young people were too unwell or unable to consent or assent. ³ = Recruited/(Introduced+Recruited)

# Supplementary Table 2 – Missing data on measures of problem levels and severity of psychopathology

|  |  |                            |              |                        | Informant          |                 |   |            |            |  |
|--|--|----------------------------|--------------|------------------------|--------------------|-----------------|---|------------|------------|--|
| -  | Self-reported e                              | motional/behavio           | ral problems | Parent-reported        | l emotional/beha   | vioral problems | Clinician rated severity of psychopathology (C-GIS) |            |            |  |
|  |  | (Y/ASR)                    |              |                        | (C/ABCL)           |                 |   |            |            |  |
| -  | Not missing                                  | Missing                    | Total        | Not missing            | Missing            | Total           | Not missing   | Missing    | Total      |  |
| Self-reported emotional/ behavioral problems   |  |                            |              | X <sup>2</sup> (1, n = | = 683) = 12.351, p | < 0.001         | $X^{2}(1, n = 683) = 0.000, p = 1$                  |            |            |  |
| normal   |  |                            |              | 298 (85.6%)            | 50 (14.4%)         | 348 (100%)      | 301 (86.5%)   | 47 (13.5%) | 348 (100%) |  |
| borderline clinical/clinical                   |  |                            |              | 250 (74.6%)            | 85 (25.4%)         | 335 (100%)      | 290 (86.6%)   | 45 (13.4%) | 335 (100%) |  |
| Parent-reported emotional/ behavioral problems | $X^{2}$ (1, $n = 572$ ) = 0.236, $p = 0.627$ |                            |              |                        |                    |                 | $X^{2}(1, n = 572) = 0.541, p = 0.462$              |            |            |  |
| normal   | 9 (3.5%)                                     | 245 (96.5%)                | 254 (100%)   |                        |                    |                 | 225 (88.6%)   | 29 (11.4%) | 254 (100%) |  |
| borderline clinical/clinical                   | 15 (4.7%)                                    | 303 (95.3%)                | 318 (100%)   |                        |                    |                 | 274 (86.2%)   | 44 (13.8%) | 318 (100%) |  |
| Clinician rated severity of psychopathology    | X2 (2, n =                                   | = 640) = 5.158, <i>p</i> = | 0.076        | X <sup>2</sup> (2, n   | = 640) = 12.08, p  | = 0.002         |   |            |            |  |
| not at all ill                                 | 55 (91.7%)                                   | 5 (8.3%)                   | 60 (100%)    | 44 (73.3%)             | 16 (26.7%)         | 60 (100%)       |   |            |            |  |
| borderline/mildly/moderately ill               | 411 (93.8%)                                  | 27 (6.2%)                  | 438 (100%)   | 358 (81.7%)            | 80 (18.3%)         | 438 (100%)      |   |            |            |  |
| markedly ill or more severe                    | 125 (88.0%)                                  | 17 (12.0%)                 | 142 (100%)   | 97 (68.3%)             | 45 (31.7%)         | 142 (100%)      |   |            |            |  |

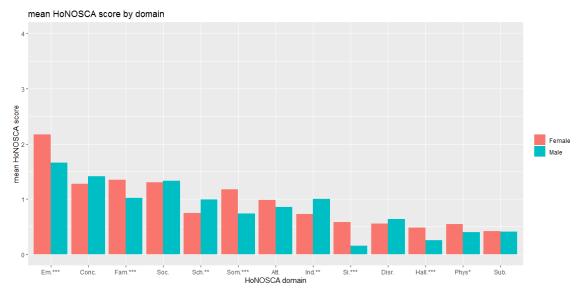
Note. Pr. = problems. Patterns of missing data on severity of psychopathology (CGI-S) and problem levels (Y/ASR and C/ABCL) were assessed using Chi-square tests. All analyses were conducted in R with a significance level of  $\alpha$ =0.05.

# Supplementary Table 3: Parent/carer and clinician demographic characteristics

| Parent/carer characteristics (n = 651)                   | N (%)       |  |  |  |  |  |
|--|-------------|--|--|--|--|--|
| Relationship to the young person participating           |             |  |  |  |  |  |
| biological parent  | 585 (89.9%) |  |  |  |  |  |
| other (adoptive or foster parent, grandparent,           |             |  |  |  |  |  |
| stepparent, or other)                                    | 21 (3.2%)   |  |  |  |  |  |
| missing  | 45 (6.9%)   |  |  |  |  |  |
| Highest completed level of education of PCs <sup>1</sup> |             |  |  |  |  |  |
| primary  | 37 (5.7%)   |  |  |  |  |  |
| secondary/vocational                                     | 331 (50.8%) |  |  |  |  |  |
| higher (under/postgraduate)                              | 201 (30.9%) |  |  |  |  |  |
| missing  | 82 (12.6%)  |  |  |  |  |  |
| Psychopathology in biological parents                    |             |  |  |  |  |  |
| No psychopathology                                       | 351 (53.9%) |  |  |  |  |  |
| Psychopathology in one or both biological parents        | 194 (29.8%) |  |  |  |  |  |
| missing  | 106 (16.3%) |  |  |  |  |  |
| Clinician characteristics (n = 318)                      |             |  |  |  |  |  |
| Profession   |             |  |  |  |  |  |
| psychiatrist   | 116 (36.5%) |  |  |  |  |  |
| psychologist   | 64 (20.1%)  |  |  |  |  |  |
| nurse  | 33 (10.4%)  |  |  |  |  |  |
| psychotherapist  | 33 (10.4%)  |  |  |  |  |  |
| other (e.g. family and occupational therapists,          | 29 (9.2%)   |  |  |  |  |  |
| support workers)   |             |  |  |  |  |  |
| missing  | 43 (13.5%)  |  |  |  |  |  |
| Years of experience working in mental health             |             |  |  |  |  |  |
| 5 years or less  | 47 (14.8%)  |  |  |  |  |  |
| 6 to 10 years  | 58 (18.2%)  |  |  |  |  |  |
| 11 to 20 years   | 113 (35.6%) |  |  |  |  |  |
| more than 20 years                                       | 57 (17.9%)  |  |  |  |  |  |
| missing  | 43 (13.5%)  |  |  |  |  |  |

Note: percentages for parent/carers are based on the total number of parents/carers participating (n = 651). Percentages for clinicians are based on the total number of clinicians participating (n = 318); ¹ as a surrogate for socioeconomic status

### Supplementary Figure 1 - Mean HoNOSCA score by domain



Note: \*, \*\* and \*\*\* indicate gender differences on a p < 0.05, p < 0.01 or p < 0.001 level; gender differences were assessed with a Kruskal-Wallis rank sum test; Em. = emotional and related symptoms, Conc. = overactivity attention and concentration, Fam. = family life and relationships, Soc. = peer relationships, Sch. = scholastic or language skills, Som. = non-organic somatic symptoms, Att. = poor school attendance, Ind. = self-care and independence, Si. = non-accidental self-injury, Disr. = disruptive antisocial or aggressive behaviour, Hall. = hallucinations and delusions, Phys. = physical illness or disability problems, Sub. = alcohol, substance/solvent misuse