**Supplementary material**

**Supplementary Table 1** Patterns of missing data and efficacy of inverse probability weights.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Complete child | 23 yearsunweighted | 23 yearsweighted | 33 yearsunweighted | 33 yearsweighted | 42 yearsunweighted | 42 yearsweighted | 50 yearsunweighted | 50 yearsWeighted |
|  | N = 12553 | N = 9716 | N = 9716 | N = 8830 | N = 8830 | N = 8790 | N = 8790 | N = 7537 | N = 7537 |
|  |  |  |  |  |  |  |  |  |  |
| ACEs |  |  |  |  |  |  |  |  |  |
|  0 (%) | 73.0 | 74.7 | 73.1 | 74.9 | 73.0 | 74.8 | 72.9 | 75.9 | 73.2 |
|  1 (%) | 19.8 | 19.1 | 19.8 | 19.1 | 20.1 | 19.2 | 20.1 | 18.4 | 19.7 |
|  2+ (%) | 7.1 | 6.2 | 7.1 | 6.0 | 7.0 | 5.9 | 7.0 | 5.7 | 7.1 |
| Male (%) | 51.3 | 49.7 | 51.3 | 49.1 | 51.3 | 48.8 | 51.3 | 48.9 | 51.3 |
| Birth weight (<2500g, %) | 5.8 | 5.8 | 5.8 | 5.6 | 5.8 | 5.7 | 5.8 | 5.8 | 5.8 |
| Child mental health problem (%) | 23.1 | 21.9 | 23.1 | 21.3 | 23.1 | 21.4 | 23.0 | 20.5 | 23.1 |
| Maternal smoking pregnancy (%) | 33.1 | 32.7 | 33.1 | 32.3 | 33.1 | 32.5 | 33.1 | 31.7 | 33.2 |
| Maternal age at birth (<18 yrs, %) | 1.1 | 1.0 | 1.1 | 0.9 | 1.1 | 1.0 | 1.1 | 1.0 | 1.1 |
| Maternal education (low, %) | 75.2 | 74.8 | 75.2 | 74.0 | 75.2 | 73.8 | 75.2 | 73.0 | 75.2 |
| Father social class (IV/V, %) | 21.0 | 20.1 | 21.0 | 19.4 | 20.9 | 19.7 | 20.9 | 18.9 | 20.9 |
| Child reading (z score, mean) | .02 | .07 | .02 | .10 | .02 | .10 | .02 | .14 | .02 |
| Child maths (z score, mean) | .02 | .05 | .01 | .06 | .01 | .07 | .01 | .10 | .01 |

**Supplementary Table 2** Rates of prospectively reported ACEs in the National Child Development Study.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Male |  | Female | Total |  |
| N | % |  | n | % | n | % |
| Parental Separation |  | 836 | 13.0 |  | 843 | 13.4 | 1679 | 13.4 |
| Family member Incarceration |  | 351 | 5.5 |  | 341 | 5.6 | 692 | 5.5 |
| Physical Neglect |  | 496 | 7.7 |  | 330 | 5.4 | 826 | 6.6 |
| Family Member Mental Illness |  | 414 | 7.2 |  | 402 | 7.3 | 816 | 7.2 |
| In Care |  | 272 | 4.2 |  | 218 | 3.6 | 490 | 3.9 |
| Parental Substance Abuse |  | 57 | 1.0 |  | 54 | 1.0 | 111 | 1.0 |
| Number of ACEs |  |  |  |  |  |  |  |  |
|  0 |  | 4680 | 72.7 |  | 4488 | 73.4 | 9168 | 73.0 |
|  1 |  | 1269 | 19.7 |  | 1219 | 19.9 | 2488 | 19.8 |
|  2+ |  | 489 | 7.6 |  | 408 | 6.7 | 897 | 7.1 |

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**Supplementary Table 3** Prevalence of adult mood problems by age and gender.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Total |  | Male |  | Female |  | Female vs male |
|  | N | % | N | % | N | % | OR [95% CI] |
| 23 years1 | 1222 | 12.6 | 361 | 7.2 | 861 | 18.2 | 2.85 [2.5-3.2] \*\*\* |
| 33 years2 | 888 | 10.1 | 306 | 6.8 | 582 | 13.5 | 2.16 [1.9-2.5] \*\*\* |
| 42 years3 | 1732 | 19.7 | 722 | 16.0 | 1010 | 23.6 | 1.62 [1.5-1.8] \*\*\* |
| 50 years4 | 1657 | 22.0 | 678 | 17.5 | 979 | 26.7 | 1.71 [1.5-1.9] \*\*\* |
| Recurrent5 | 1354 | 13.8 | 471 | 9.4 | 883 | 18.5 | 2.19 [1.9-2.5] \*\*\* |

1N = 9716; 2N = 8830; 3N = 8790; 4N = 7537; 5N = 9793 (minimum two adult assessments)

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|  |  |  |
| --- | --- | --- |
|  | Childhood mental health problemsOR [95% CI], p value | Adult mood problemsOR [95% CI], p value |
|  | 7 years | 11 years | 16 years (mother) | 16 years (teacher) | 23 years  | 33 years | 42 years | 50 years |
|  | N = 12472 | N =11240 | N =9412 | N = 9861 | N = 9716 | N = 8830 | N = 8790 | N = 7537 |
| Parent separation | 1.29 [1.1-1.3] \*\*\* | 1.27 [1.1-1.5] \*\*\* | 1.79 [1.5-2.1] \*\*\* | 1.93 [1.6-2.3] \*\*\* | 1.41 [1.2-1.7] \*\*\* | 1.41 [1.2-1.7] \*\*\* | 1.40 [1.2-1.6] \*\*\* | 1.43 [1.2-1.7] \*\*\* |
| In care | 2.60 [2.1-3.3] \*\*\* | 2.37 [1.8-3.1] \*\*\* | 3.39 [2.6-4.3] \*\*\* | 3.60 [2.8-4.6] \*\*\* | 1.89 [1.5-2.4] \*\*\* | 2.51 [1.9-3.3] \*\*\* | 2.20 [1.7-2.8] \*\*\* | 2.01 [1.6-2.6] \*\*\* |
| Physical neglect | 1.83 [1.5-2.2] \*\*\* | 2.28 [1.9-2.8] \*\*\* | 2.53 [2.0-3.1] \*\*\* | 3.98 [3.3-4.8] \*\*\* | 1.97 [1.6-2.4] \*\*\* | 2.02 [1.6-2.5] \*\*\* | 1.69 [1.4-2.0] \*\*\* | 1.55 [1.3-1.9] \*\*\* |
| Parent alcoholism  | 2.11 [1.3-3.5] \*\*\* | 1.02 [0.5-2.1] | 3.43 [2.1-5.7] \*\*\* | 2.12 [1.2-3.7] \*\* | 3.43 [2.2-5.3] \*\*\* | 1.74 [0.9-3.3] | 2.34 [1.4-3.8] \*\* | 1.58 [0.9-2.7] |
| Mental illness | 2.43 [2.0-2.9] \*\*\* | 2.48 [2.0-3.0] \*\*\* | 2.61 [2.1-3.2] \*\*\* | 1.98 [1.6-2.5] \*\*\* | 2.01 [1.6-2.5] \*\*\* | 2.13 [1.7-2.6] \*\*\* | 1.42 [1.2-1.7] \*\* | 2.00 [1.6-2.4] \*\*\* |
| Family criminality | 1.68 [1.3-2.1] \*\*\* | 1.76 [1.4-2.2] \*\*\* | 2.56 [2.0-3.2] \*\*\* | 2.79 [2.3-3.5] \*\*\* | 2.28 [1.9-2.8] \*\*\* | 1.83 [1.4-2.4] \*\*\* | 1.49 [1.2-1.8] \*\*\* | 1.62 [1.3-2.0] \*\*\* |

**Supplementary Table 4** Unadjusted associations between specific adverse childhood experiences and child mental health problems and adult mood problems.

ACE = Adverse Childhood Experiences; OR [95% CI] = Odds ratio [95% Confidence Interval]; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.