Supplementary Table 1. Childhood adversity exposures: collection and categorisation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Description | Categories | Age1 | Method |
| **Psychosocial early life adversities** | | | | |
| Maltreatment | Participant asked “As a child do you feel you were mistreated by your parents in any way?” | Yes vs No | 43 years | Retrospective report by participants |
| Low parental concern | Parental concern derived in teacher interviews, in which teachers were asked “to what extent do this child’s parents show interest in his/her progress at school?” | Little interest vs average to very interested | 13 years | Teacher questionnaires/school records and maternal interview |
| Parental psychiatric history | Mother asked if they or partner had a psychiatric illness during the 0-15 yrs of child’s life | Present vs not present | 0-15 years | Maternal report |
| Parental divorce | Experience of parental divorce/separation during the 0-15 yrs of child’s life | Divorced vs not divorced | 0-15 years | Maternal report |
| Mother affectionless control | Parental bonding instrument used to collect retrospective report of participants perception on their parents’ style of attachment and affection – affectionless control defined: mothers care score < 27 & overprotection score >13.5.2 | Affectionless control vs not affectionless control parenting | 43 years | Retrospective report by participants |
| Father affectionless control | Parental bonding instrument used to collect retrospective report of participants perception on their parents’ style of attachment and affection – affectionless control defined: fathers care score < 24 & overprotection score >12.5.2 | Affectionless control vs not affectionless control parenting | 43 years | Retrospective report by participants |
| Parental death | Experience of parental death during the 0-15 yrs of child’s life | Parental death vs no parental death | 0-15 years | Reported by parent/ guardian |
| Maternal separation | Experience of separation from the mother during the 0-6 yrs of child’s life | Separation (permanent, regular, or ≥ 9 weeks) vs no separation (< 3.5 days) | 0-6 years | Maternal reports |
| **Socioeconomic adversities** | | | | |
| Low father social class | Fathers occupation according to the UK Registrar General’s Classification | professional & intermediate, skilled nonmanual, skilled manual, partly skilled & unskilled | 4 years  (or 7/11 if missing) | Maternal report of occupation |
| Renting a house from a private landlord | Housing tenure | Private landlord owned home vs nonprivate landlord owned home (council, charitable trust, and home owner) | 2 years  (or 11/15 years if missing) | Maternal/health visitor reports |
| Maternal education | Maternal educational attainment | Primary only vs other | 4 years | Maternal report of education |

Footenote:

1We used adversity measures from the earliest possible visit. If an individual was missing data, we used their measure from the next visit. For example, “4 years (or 7/11 years if missing)” means we used data from the age 4 years visit. If this was missing, we used data from the age 7 years visit. And if this was missing, we used data from the age 11 years visit.

2Caleyachetty R, Hardy R, Cooper R, Richards M, Howe LD, Anderson E, Kuh D, Stafford M. Modeling Exposure to Multiple Childhood Social Risk Factors and Physical Capability and Common Affective Symptoms in Later Life. J Aging Health. 2018;30(3):386-407

Supplementary table 2. Demographic, exposure and outcome variables of those included in the current study (Cortisol sample (N=843))

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Included (N= 843)** | | **Excluded (N=4,519)** | |  |
| **Demographic** | N with data N with data | | | | | p-value for difference |
| Birthweight | Mean (SD) | 3.4 (0.5) | 843 | 3.4 (0.6) | 4484 | 0.537 |
| Sex | % |  |  |  |  |  |
| Female |  | 52.9 | 843 | 46.5 | 4,519 | 0.001 |
| Maternal education | % |  |  |  |  |  |
| Primary |  | 56.9 |  | 65.2 | 3,498 | <0.001 |
| Other |  | 43.1 | 843 | 34.8 |  |  |
| Paternal social class | % |  |  |  |  |  |
| Professional and intermediate |  | 30.7 |  | 24.6 | 3,830 | <0.001 |
| Skilled non-manual |  | 18.5 |  | 15.0 |  |  |
| Skilled manual |  | 30.0 |  | 34.0 |  |  |
| Partly skilled and unskilled |  | 20.8 | 843 | 26.6 |  |  |
| Housing tenure | % |  |  |  |  |  |
| Private landlord |  | 51.0 |  | 44.7 | 3,853 | 0.001 |
| Other |  | 49.0 | 843 | 55.3 |  |  |
| **Exposures** |  |  |  |  |  |  |
| ELA score | % |  |  |  |  |  |
| 0 |  | 47.3 | 843 | 41.7 | 1,253 | 0.08 |
| 1 |  | 26.5 |  | 30.0 |  |  |
| 2 |  | 19.5 |  | 20.8 |  |  |
| >3 |  | 6.8 |  | 7.5 |  |  |
| Individual adversities | % |  |  |  |  |  |
| Maltreatment |  | 3.9 | 843 | 7.1 | 2,197 | 0.001 |
| Low parental concern for child’s education |  | 9.1 | 843 | 17.7 | 2,971 | <0.001 |
| Parental psychiatric history |  | 2.3 | 843 | 2.1 | 4,519 | 0.747 |
| Parental divorce |  | 3.1 | 843 | 6.3 | 4,519 | <0.001 |
| Paternal affectionless control |  | 30.3 | 843 | 30.3 | 2,067 | 0.964 |
| Maternal affectionless control |  | 30.7 | 843 | 30.1 | 2,101 | 0.751 |
| Parental death |  | 3.7 | 843 | 5.9 | 4,431 | 0.009 |
| Parental separation |  | 3.8 | 843 | 6.4 | 3,608 | 0.004 |
| **Outcomes** |  |  |  |  |  |  |
| Morning cortisol (nmol/L) | Median (IQR) | 18.61 (11.94) | 843 | 17.96 (11.23) | 935 | 0.317 |
| Evening cortisol (nmol/L) | Median (IQR) | 2.36 (1.87) | 843 | 2.43 (2.27) | 922 | 0.007 |
| DS (nmol/L/h) | Mean (SD) | -1.2 (0.69) | 843 | -1.15 (0.66) | 726 | 0.117 |
| CAR (nmol/L) | Mean (SD) | 6.25 (11.97) | 843 | 5.69 (11.19) | 719 | 0.346 |

and those not included in the current study.

Abbreviations: ELA: early life adversity, DS: diurnal slope, CAR: cortisol awakening response, IQR: interquartile range, SD: standard deviation

Supplementary table 3. Demographic, exposure and outcome variables of those included in the current study (CRP sample (N=1,050))

and those not included in the current study.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Included (N=1,050)** | | **Excluded (N=4,312)** | |  |
| **Demographic** |  |  | N with data |  | N with data | p-value for difference |
| Birthweight | Mean (SD) | 3.4 (0.5) | 1,150 | 3.36 (0.6) | 4,177 | 0.093 |
| Sex | % | - | - | - | - |  |
| Female |  | 50.6 | 1,150 | 46.7 | 4, 212 | 0.017 |
| Maternal education | % | - | - |  |  |  |
| Primary |  | 56.8 | - | 66.0 |  |  |
| Other |  | 43.2 | 1,150 | 34.0 | 3,191 | <0.001 |
| Paternal social class | % | - | - |  |  |  |
| Professional and intermediate |  | 30.1 | - | 24.2 |  |  |
| Skilled non-manual |  | 17.9 | - | 14.9 |  |  |
| Skilled manual |  | 30.6 | - | 34.1 |  |  |
| Partly skilled and unskilled |  | 21.4 | 1,150 | 26.9 | 3, 523 | <0.001 |
| Housing tenure | % | - | - | - |  |  |
| Private landlord |  | 49.1 | - | 44.8 |  |  |
| Other |  | 50.9 | 1,150 | 55.2 | 3, 546 | 0.010 |
| **Exposure variables** |  | - | - |  |  |  |
| ELA score | % | - | - |  |  |  |
| 0 |  | 46.3 | - | 41.1 |  |  |
| 1 |  | 27.5 | - | 29.9 |  |  |
| 2 |  | 19.6 | - | 21.1 |  |  |
| >3 |  | 6.7 | 1,150 | 7.8 | 946 | 0.124 |
| Individual adversities | % | - | - |  |  |  |
| Maltreatment |  | 4.6 | 1,150 | 7.2 | 1,890 | 0.004 |
| Low parental concern for child’s education |  | 11.0 | 1,150 | 17.9 | 2,664 | <0.001 |
| Parental psychiatric history |  | 2.00 | 1,150 | 2.1 | 4, 212 | 0.775 |
| Parental divorce |  | 3.2 | 1,150 | 6.5 | 4,212 | <0.001 |
| Paternal affectionless control |  | 30.4 | 1,150 | 30.2 | 1,760 | 0.905 |
| Maternal affectionless control |  | 29.4 | 1,150 | 30.9 | 1, 794 | 0.391 |
| Parental death |  | 3.5 | 1,150 | 6.1 | 4, 124 | 0.001 |
| Parental separation |  | 4.00 | 1,150 | 6.5 | 3,301 | 0.002 |
| **Outcomes** |  |  |  |  |  |  |
| CRP | Median (IQR) | 2 (2.3) | 1,150 | 2.2 (2.68) | 915 | 0.215 |

Abbreviations: ELA: early life adversity, DS: diurnal slope, CAR: cortisol awakening response, IQR: interquartile range, SD: standard deviation

Supplementary table 4. Cortisol and CRP outcomes at 60-64 years by individual ELAs.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Cortisol sample | | | | CRP sample | | | | | |
|  |  | CAR (nmol/L) | DS (nmol/L/h) | Evening cortisol (nmol/L) | Morning cortisol (nmol/L) | CRP (mg/L) | | | | | |
|  |  | All (N=843) | | | | All (N= 1,050) | | Female (N=582) | | Male (N=568) | |
| Adversity | Sample size (N) | Mean (SD) | Mean (SD) | Median (IQR) | Mean (SD) | Sample size (N) | Median (IQR) | Sample size (N) | Median (IQR) | Sample size (N) | Median (IQR) |
| **Maltreatment** |  |  |  |  |  |  |  |  |  |  |  |
| No maltreatment | 810 | 6.25 (12.0) | -1.21 (0.69) | 2.36 (1.86) | 20.24 (9.67) | 1,097 | 2.01 (2.23) | 549 | 2.16 (2.44) | 548 | 1.92 (2.18) |
| Maltreatment | 33 | 6.21 (11.25) | -0.96 (0.48) | 2.34 (2.08) | 16.99 (7.11) | 53 | 1.89 (3.32) | 33 | 1.98 (2.84) | 20 | 1.07 (2.74) |
| **p-value** | - | 0.985 | 0.039 | 0.546 | 0.057 | - | 0.71 |  | 0.825 |  | 0.280 |
| **Parental concern for child’s education** |  |  |  |  |  |  |  |  |  |  |  |
| High parental concern for child’s education | 766 | 6.1 (11.87) | -1.21 (0.69) | 2.35 (1.87) | 20.31 (9.58) | 1,024 | 1.97 (2.23) | 520 | 2.09 (2.5) | 504 | 1.9 (2.38) |
| Low parental concern for child’s | 77 | 7.75 (12.94) | -1.07 (0.67) | 2.5 (1.94) | 18.07 (9.6) | 126 | 2.57 (2.6) | 62 | 2.71 (2.72) | 64 | 2.43 (2.46) |
| **p-value** | - | 0.247 | 0.078 | 0.552 | 0.051 | - | 0.041 |  | 0.070 |  | 0.275 |
| **Parental psychiatric history** |  |  |  |  |  |  |  |  |  |  |  |
| No parental psychiatric history | 824 | 6.17 (11.94) | -1.2 (0.69) | 2.36 (1.87) | 20.14 (9.64) | 1,127 | 2.0 (2.3) | 572 | 2.14 (2.49) | 555 | 1.92 (2.22) |
| Parental psychiatric history | 19 | 9.66 (13.04) | -1.1 (0.54) | 2.83 (3.94) | 18.86 (7.34) | 23 | 1.78 (2.43) | 10 | 2.62 (2.08) | 13 | 1.68 (1.03) |
| **p-value** | - | 0.209 | 0.526 | 0.040 | 0.567 | - | 0.491 |  | 0.936 |  | 0.349 |
| **Parental divorce** |  |  |  |  |  |  |  |  |  |  |  |
| No parental divorce | 817 | 6.27 (12.1) | -1.2 (0.69) | 2.37 (1.86) | 20.11 (9.63) | 1113 | 2 (2.27) | 561 | 2.15 (2.43) | 552 | 1.91 (2.26) |
| Parental divorce | 26 | 5.59 (6.77) | -1.26 (0.6) | 2.19 (1.75) | 19.97 (8.76) | 37 | 1.76 (2.56) | 21 | 1.83 (5.0) | 16 | 1.72 (1.08) |
| **p-value** | - | 0.774 | 0.676 | 0.027 | 0.939 | - | 0.900 |  | 0.769 |  | 0.543 |
| **Paternal control** |  |  |  |  |  |  |  |  |  |  |  |
| Normal control | 588 | 6.09 (11.97) | -1.23 (0.68) | 2.37 (1.87) | 20.53 (9.58) | 800 | 2.0 (2.15) | 408 | 2.1 (2.37) | 392 | 1.92 (2.5) |
| Paternal affectionless control | 255 | 6.62 (11.98) | -1.13 (0.69) | 2.34 (1.86) | 19.15 (9.59) | 350 | 2.0 (2.56) | 174 | 2.19 (2.83) | 176 | 1.9 (2.44) |
| **p-value** | - | 0.557 | 0.035 | 0.971 | 0.056 | - | 0.428 |  | 0.494 |  | 0.636 |
| **Maternal control** |  |  |  |  |  |  |  |  |  |  |  |
| Normal control | 584 | 6.08 (11.48) | -1.21 (0.67) | 2.38 (1.94) | 20.32 (9.47) | 812 | 2.0 (2.17) | 401 | 2.04 (2.2) | 411 | 1.94 (2.58) |
| Maternal affectionless control | 259 | 6.63 (13.03) | -1.17 (0.71) | 2.34 (1.82) | 19.64 (9.87) | 338 | 2.0 (2.6) | 181 | 2.3 (2.83) | 157 | 1.88 (2.15) |
| **p-value** | - | 0.539 | 0.431 | 0.820 | 0.347 | - | 0.341 |  | 0.410 |  | 0.696 |
| **Parental death** |  |  |  |  |  |  |  |  |  |  |  |
| No parental death | 812 | 6.09 (11.78) | -1.21 (0.67) | 2.38 (1.87) | 20.16 (9.47) | 1,110 | 2.04 (2.3) | 560 | 2.16 (2.48) | 550 | 1.96 (2.25) |
| Parental death | 31 | 10.47 (15.88) | -1.05 (0.99) | 2.12 (2.42) | 18.86(12.51) | 40 | 1.82 (1.85) | 22 | 2.05 (2.32) | 18 | 1.28 (1.05) |
| **p-value** | - | 0.045 | 0.203 | 0.717 | 0.461 | - | 0.241 |  | 0.662 |  | 0.021 |
| **Parental separation** |  |  |  |  |  |  |  |  |  |  |  |
| No parental separation | 811 | 6.19 (11.94) | -1.21 (0.69) | 2.36 (1.86) | 20.16 (9.62) | 1,104 | 2.0 (2.24) | 559 | 2.12 (2.43) | 545 | 1.9 (2.21) |
| No Parental separation | 32 | 7.79 (12.82) | -1.08 (0.69) | 2.57 (2.24) | 18.73 (9.08) | 46 | 2.41 (2.57) | 23 | 2.4 (4.39) | 23 | 2.41 (2.88) |
| **p-value** | - | 0.459 | 0.329 | 0.561 | 0.407 | - | 0.419 |  | 0.570 |  | 0.56 |

Abbreviations: ELA: early life adversity, CRP: c-reactive protein, CAR: cortisol awakening response, DS: diurnal slop

Supplementary table 5. Associations between individual ELAs and cortisol outcomes at 60-64 years: Estimated using general linear regression

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CAR  (nmol/L) | DS  (nmol/L/h) | Evening cortisol (nmol/L) | Morning cortisol  (nmol/L) |
|  | s% (95% CI) | s% (95% CI) | s% (95% CI) | s% (95% CI) |
| Model 1 |  |  |  |  |
| **Adversity** |  |  |  |  |
| Maltreatment | 0.82 (-11.4, 13.04) | 6.9 (-0.36,14.16) | -8.06 (-30.62, 14.5) | -22.06 (-43.19, -0.93) |
| Low parental concern for child’s education | 5.3 (-2.92, 13.5) | 4.29 (-0.59, 9.17) | 4.7 (-10.44,19.89) | -18. 64 (-32.83, -4.45) |
| Parental psychiatric history | 10.74 (-5.21, 26.7) | 4.98 (-4.51, 14.48) | 32.04 (2.64, 61.44) | -2.48 (-30.16, 25.2) |
| Parental divorce | 2.04 (-11.7, 15.77) | -1.59 (-9.77, 6.59) | -30.35 (-55.64, -5.06) | -0.74 (-24.56, 23.08) |
| Paternal affectionless control | 1.01 (-4.14, 6.17) | 2.65 (-0.42, 5.71) | -0.46 (-9.98, 9.06) | -6.8 (-15.72, 2.13) |
| Maternal affectionless control | 0.47 (-4.67, 5.61) | 0.51 (-2.54, 3.57) | -1.15 (-10.63, 8.33) | -3.85 (-12.75, 5.04) |
| Parental death | 9.36 (-3.21, 21.93) | 2.05 (-5.44, 9.54) | 5.09 (-18.14, 28.32) | -25.91 (-47.65, -4.16) |
| Parental separation | 4.91 (-7.49, 17.31) | 3.4 (-3.98, 10.77) | 7.64 (-15.25, 30.53) | -14.75 (-36.23, 6.72) |
| Model 2 |  |  |  |  |
| **Adversity** |  |  |  |  |
| Maltreatment | 1.62 (-10.64, 13.89) | 6.97 (-0.35, 14.28) | -7.98 (-30.67, 14.72) | -21.54 (-42.79, -0.29) |
| Low parental concern for child’s education | 4.55 (-3.82, 12.92) | 4.48 (-0.52, 9.47) | 4.97 (-10.52, 20.47) | -16.93 (-31.43, -2.42) |
| Parental psychiatric history | 10.27 (-5.68, 26.22) | 5.1 (-4.46, 14.62) | 32. 33 (2.9, 61.8) | -2.27 (-30.00, 25. 46) |
| Parental divorce | 2.26 (-11.5,16.02) | -1.3 (-9.53, 6.93) | -32. 59 (-57.97, -7.21) | -0.96 (-24.88, 22.94) |
| Paternal affectionless control | 0.82 (-4.33, 5.97) | 2.59 (-0.48, 5.67) | -0.45 (-9.98, 9.08) | -6.43 (-15. 36, 2.51) |
| Maternal affectionless control | 0.18 (-4.96, 5.31) | 0.47 (-2.6, 3.54) | -1.13 (-10.63, 8.37) | -3.94 (-12.85, 4.97) |
| Parental death | 9.17 (-3.4, 21.75) | 1.97 (-5.55, 9.5) | 6.21 (-17.1, 29.52) | -24.64 (-46.45, -2.83) |
| Parental separation | 4.36 (-8.1, 16.82) | 3.48 (-3.97, 10.92) | 8.99 (-14.07, 32.06) | -14.5 (-36.13, 7.13) |

Footnote:

Model 1. Adjusted for age and sex

Model 2: Adjusted for age, sex, birthweight, paternal social class, maternal education, and housing tenure

All outcomes have been log transformed and multiplied by 100, so interpretation of the coefficient is on a % scale

Abbreviations: ELA: early life adversity, CI: confidence interval, DS: diurnal slope, CAR: cortisol awakening response

Supplementary Table 6. Sensitivity Analyses: Associations between ELA score and cortisol outcomes at 60-64 years in thesecondary cortisol sample (N= 627): Estimated using general linear regression

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CAR  (nmol/L) | | DS  (nmol/L/h) | | Evening cortisol  (nmol/L) | | Morning cortisol  (nmol/L) | |
|  | s% (95% CI) | p-value for trend | s% (95% CI) | p-value for trend | s% (95% CI) | p-  value for trend | s% (95% CI) | p-value for trend |
| Model 1 |  |  |  |  |  |  |  |  |
| ELA Score  (Reference group= 0) |  |  |  |  |  |  |  |  |
| 1 | 6.15 (-0.6, 12.89) |  | 2.04 (-1.97, 6.06) |  | -3.21 (-15.21, 8.8) |  | -9.8 (-21.53, 1.93) |  |
| 2 | 6.91 (-0.45, 14.27) |  | 0.18 (-4.2, 4.56) |  | -5.42 (-18.52, 7.68) |  | -4.92 (-17.72, 7.88) |  |
| ≥ 3 | 8.71 (-2.8, 20.21) | 0.024 | 6.89 (0.04, 13.74) | 0.176 | 8.55 (-11.94, 29.03) | 0.947 | -28.9 (-48.92, -8.89) | 0.018 |
| Model 2 |  |  |  |  |  |  |  |  |
| ELA Score  (Reference group= 0) |  |  |  |  |  |  |  |  |
| 1 | 6.15 (-0.59, 12.9) |  | 2.1 (-1.93, 6.13) |  | -3.12 (-15.18, 8.95) |  | -9.87(-21.61, 1.87) |  |
| 2 | 6.71 (-0.65, 14.07) |  | 0.27 (-4.13, 4.66) |  | -5.26 (-18.42, 7.9) |  | -4.63 (-17.45, 8.18) |  |
| ≥ 3 | 8.99 (-2.6, 20.58) | 0.025 | 7.19 (0.26, 14.11) | 0.159 | 8.85 (-11.87, 29.58) | 0.967 | -28.78 (-48.96, -8.61) | 0.021 |

Footnote:

Model 1. Adjusted for age and sex

Model 2: Adjusted for age, sex, birthweight, paternal social class, maternal education, and housing tenure

All outcomes have been log transformed and multiplied by 100, so interpretation of the coefficient is on a % scale

Abbreviations: ELA: early life adversity, CI: confidence interval, DS: diurnal slope, CAR: cortisol awakening response

Supplementary table 7. Associations between ELA score and CRP (mg/L) at 60-64 years**:** Estimated using tobit models

|  |  |  |
| --- | --- | --- |
|  | CRP (mg/L) | |
|  | s% (95% CI) | p-value for trend |
| Model 1 |  |  |
| ELA Score  (Reference group=0) |  |  |
| 1 | 2.28 (-9.41, 14.51) |  |
| 2 | 3.5 (-10.15, 17.14) |  |
| ≥ 3 | 14.09 (-6.84, 35.03) | 0.243 |
| Model 2 |  |  |
| ELA Score  (Reference group=0) |  |  |
| 1 | 2.83 (-9.29, 14.94) |  |
| 2 | 1.04 (-12.53, 14.6) |  |
| >3 | 8.8 (-12.13, 29.73) | 0.520 |

Footnote:

Model 1. Adjusted for age and sex

Model 2: Adjusted for age, sex, birthweight, paternal social class, maternal education, and housing tenure

CRP has been log transformed and multiplied by 100, so interpretation of the coefficient is on a % scale

Abbreviations: ELA: early life adversity, CI: confidence interval, CRP: c-reactive protein

Supplementary table 8. Associations between individual ELAs and CRP at 60-64 years: Estimated using tobit models

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CRP (mg/L) | | | |
|  | All | Females | Males | Males-Females |
|  | s% (95%CI) | s% (95%CI) | s% (95%CI) | s% (95% CI) |
| Model 1 |  |  |  |  |
| **Adversity** |  |  |  |  |
| Maltreatment | -4.77 (-28.97, 19.42) | 4.95 (-26.09, 35.98) | -20.33 (-59.18, 18.51) | 24.95 (-24.79, 74.7) |
| Low parental concern for child’s education | 16.23 (0.03, 32.42) | 21.28 (-1.91, 44.47) | 11.39 (-11.27, 34.06) | 10.12 (-22.26, 42.5) |
| Parental psychiatric history | -10.02 (-46.21, 26.18) | 6.66 (-48.62, 61.95) | -22.57 (-70.44, 25.3) | 28.67 (-44.29, 101.63) |
| Parental divorce | -0.18 (-28.92, 28.56) | 7.46 (-31.02, 45.93) | -10.31 (-53.67, 33.06) | 17.14 (-40.78, 75.06) |
| Paternal affectionless control | 4.66 (-6.34, 15.67) | 6.12 (-9.55, 21.79) | 3.32 (-12.17, 18.81) | 2. 79 (-19.23, 24.8) |
| Maternal affectionless control | 5.28 (-5.85, 16.4) | 6.8 (-8.69, 22.29) | 3.59 (12.43, 19.61) | 3.14 (-19.13, 25.41) |
| Parental death | -17.52 (-45.14, 10.11) | 8.62 (-28.99, 46.23) | -49.15 (-89.85, -8.45) | 57.84 (2.42, 113.26) |
| Parental separation | 8.56 (-17.3, 34.4) | 9.8 (-27.02, 46.62) | 7.63 (-28.8, 44.06) | 2.69 (-49.00, 54.4) |
| Model 2 |  |  |  |  |
| **Adversity** |  |  |  |  |
| Maltreatment | -5.95 (-29.96, 18.05) | 3.28 (-27.35, 33.9) | -21.41 (60.19, 17.37) | 22.92 (-26.36, 72.21) |
| Low parental concern for child’s education | 10.23 (-6.21, 26.67) | 13.16 (-10.02, 36.34) | 7.47 (-15.8, 30.74) | 11.69 (-20.4, 43.78) |
| Parental psychiatric history | -10.45 (-46.42, 25.35) | -3.1 (-57.58, 51.38) | -18.75 (-66.65, 29.14) | 16.92 (-55.65, 89.5) |
| Parental divorce | -6.41 (-35.96, 22.14) | -3.22 (-41.15, 34.71) | -14. 6 (-57.92, 28.73) | 17.66 (-39.68, 75.0) |
| Paternal affectionless control | 3.92 (-6.96, 14.81) | 4.32 (-11.05, 19.7) | 3.37 (-12.06, 18.81) | 1.1 (-20.7, 22.92) |
| Maternal affectionless control | 4.22 (-6.8, 15.23) | 3.75 (-11.45, 18.96) | 4.0 (-12.0, 20.0) | 0.36 (-21.72, 22.44) |
| Parental death | -20.13 (-47.46, 7.19) | 2.66 (-34.12, 39.43) | -50.15 (-90.81, -9.5) | 54.19 (-0.67, 109.05) |
| Parental separation | 4.04 (-21.72, 29.81) | 1.72 (-34.53, 37.96) | 6.94 (-29.62, 43.5) | 0.23 (-50.9, 51.35) |

Footnote:

Model 1. Adjusted for age (and sex if not stratified by sex)

Model 2: Adjusted for age, birthweight, paternal social class, maternal education, and housing tenure (and sex if not stratified by sex)

All outcomes have been log transformed and multiplied by 100, so interpretation of the coefficient is on a % scale

Abbreviations: ELA: early life adversity, CI: confidence interval, CRP: c-reactive protein

\*males-females: difference in effect sizes between males and females from a model with sex-by-adversity interaction terms

Supplementary table 9. Associations between ELA score and cortisol outcomes at 60-64 years (N= 1,462) using FIML estimation.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CAR (nmol/L %) | | DS (nmol/L %) | | Evening cortisol (nmol/L %) | | Morning cortisol (nmol/L %) | |
|  | s% (95% CI) | p-value for trend | s% (95% CI) | p-value for trend | s% (95% CI) | p-value for trend | s% (95% CI) | p-value for trend |
| Model 2 |  |  |  |  |  |  |  |  |
| ELA Score  (Reference group= 0) |  |  |  |  |  |  |  |  |
| 1 | 2.3 (-2.44, 7.03) |  | 2.32 (-0.74, 5.38) |  | 0.52 (-9.48, 10.52) |  | -7.8 (-16.3, 0.68) |  |
| 2 | 1.46 (-3.85, 6.78) |  | 1.95 (-1.48, 5.38) |  | 1.73 (-9.48, 12.95) |  | -5.15 (-14.68, 4.37) |  |
| ≥ 3 | 2.53 (-5.5, 10.57) | 0.418 | 7.88 (2.71, 13.05) | 0.007 | 0.23 (-16.72, 17.17) | 0.831 | -25.91 (-40.27, -11.55) | 0.002 |
| Model 3 |  |  |  |  |  |  |  |  |
| ELA score  (Reference group = 0) |  |  |  |  |  |  |  |  |
| 1 | 2.13 (-2.61, 6.88) |  | 2.37 (-0.7, 5.44) |  | 1.05 (-8.95, 11.06) |  | -7.58 (-16.12, 0.96) |  |
| 2 | 1.35 (-3.9, 6.65) |  | 2.02 (-1.41, 5.46) |  | 1.93 (-9.25, 13.11) |  | -5.01 (-14. 57, 4.54) |  |
| ≥ 3 | 2.31 ( -5.72, 10.34 | 0.457 | 7.96 (2.77, 13.15) | 0.006 | 0.36 (-16.58, 17.3) | 0.798 | -25.04 (-39.47, -10.61) | 0.004 |

Footnote:

Model 1. Adjusted for age and sex

Model 2: Adjusted for age, sex, birthweight, paternal social class, maternal education, and housing tenure

All outcomes have been log transformed and multiplied by 100, so interpretation of the coefficient is on a % scale

Abbreviations: ELA: early life adversity, CI: confidence interval, DS: diurnal slope, CAR: cortisol awakening response