**Supplemental materials**

Table S.1. *Descriptive statistics of OXTR methylation*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CpG sites | Mean | *SD* | Minimum | Maximum |
| cg00078085 | .0699 | .02402 | .02 | .18 |
| cg02192228 | .1926 | .04780 | .11 | .43 |
| cg03987506 | .0697 | .02304 | .02 | .14 |
| cg04523291 | .2239 | .05296 | .11 | .41 |
| cg08535600 | .1444 | .03810 | .08 | .29 |
| cg09353063 | .0741 | .00977 | .05 | .11 |
| cg12695586 | .0896 | .02665 | .04 | .28 |
| cg15317815 | .2506 | .05960 | .13 | .45 |
| cg17285225 | .1179 | .02728 | .08 | .20 |
| cg19619174 | .0641 | .01889 | .05 | .22 |
| cg23391006 | .0669 | .00888 | .05 | .09 |
| cg27501759 | .1237 | .04843 | .05 | .31 |

Table S.2. *Correlation between OXTR methylation and study variables*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *OXTR* methylation | Adult adversity(W2-W4) | Distrust(W5) | Pessimism (W5) | Depression (W5) |
| Factor 1 | .052 |  | -.011 |  | .067 |  | -.020 |  |
| Factor 2 | .262 | \*\* | .213 | \* | .225 | \* | .113 |  |
| Factor 3 | -.044 |  | -.135 |  | .112 |  | -.053 |  |
| Factor 4 | .166 |  | .256 | \* | .076 |  | .153 |  |

Table S.3. *Summary of Indirect Effects for Figure S2*

|  |  |  |  |
| --- | --- | --- | --- |
| Paths | Total effect | Indirect effect | The portion of the variance for mediator |
| Adult adversity 🡪 *OXTR* methylation 🡪 Distrust 🡪 Depression | .619\*[.118; 1.175] | .057\*[.010; .215] | 9.208% |
| Adult adversity 🡪 *OXTR* methylation 🡪 Pessimism 🡪 Depression | .619\*[.118; 1.175] | .024\*[.001; .119] | 3.877% |

*Note*. The values presented are unstandardized parameters. Bootstrapping with 1,000 replications.

\**p* ≤ .05, (two-tailed test).

Figure S.1. Scatter plot representing the association between adult adversity (waves 2, 3, and 4) and OXTR methylation. The solid line displays the predicted regression line, and each dot represents one participant (*N* = 100).

**Figure S.2.** *OXTR* methylation as a mediator of the effect of stressful environment on depression controlling for average methylation score.

*Note:* χ2 = 36.075, *df* = 58, *p* = .998. Values presented are standardized parameter estimates. An average methylation score was calculated across all CpG sites (485,577). Childhood trauma, chronological age, and relationship status are controlled. The bold words indicate that the test of indirect effect is significant. *N* = 100. \*\**p* ≤ .01; \**p* ≤ .05, †*p* < .10 (two-tailed tests).