**Additional tests**

* The CausalTree results suggested that the negative effect of exposure to traditional ACEs on self-reported health was worsen by “need instability”.
* To examine that hypothesis, we divide the sample in 4 groups: a) kids who did not expose to ACEs or OCS (in particular, “need insatiability”); b) kids exposed to ACEs only, c) kids exposed to both ACEs and OCS; and d) kids who experience only OCS.
* The background characteristics of the four groups are quite different. We used entropy balancing procedure to reweight the sample to a common distribution before engaging in any comparison.

| Table 1: Sample characteristics by group before and after weighting | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Raw** | | | | **Weighted** | | | |
| **var** | **None** | **ACE** | **ACE + OCS** | **OCS** | **None** | **ACE** | **ACE + OCS** | **OCS** |
| female | 0.47 | 0.49 | 0.53 | 0.45 | 0.49 | 0.49 | 0.49 | 0.49 |
| agegrp | 2.88 | 3.25 | 3.84 | 3.66 | 4.00 | 4.00 | 4.00 | 4.00 |
| black | 0.08 | 0.08 | 0.19 | 0.18 | 0.21 | 0.21 | 0.21 | 0.21 |
| white | 0.07 | 0.09 | 0.20 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 |
| hisp | 0.11 | 0.10 | 0.17 | 0.15 | 0.23 | 0.23 | 0.23 | 0.23 |
| othrace | 0.01 | 0.01 | 0.02 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 |
| mhighgd\_bin | 0.03 | 0.02 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 |
| rural | 0.25 | 0.22 | 0.24 | 0.25 | 0.23 | 0.23 | 0.23 | 0.23 |
| mixur | 0.05 | 0.07 | 0.09 | 0.07 | 0.06 | 0.06 | 0.06 | 0.06 |
| mhhinco | 130.0 | 111.9 | 44.9 | 55.9 | 65.8 | 65.8 | 65.8 | 65.8 |
| NA\_race | 0.23 | 0.11 | 0.10 | 0.14 | 0.29 | 0.29 | 0.29 | 0.29 |
| NA\_rural | 0.29 | 0.18 | 0.19 | 0.21 | 0.37 | 0.37 | 0.37 | 0.37 |
| NA\_mhhinco | 0.05 | 0.01 | 0.01 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 |
| n | 1834 | 765 | 1910 | 1152 | 1834 | 765 | 1910 | 1152 |

* After ensuring comparability, we implement 3 test, comparing i) exposure to traditional ACEs vis-à-vis exposure to neither ACEs nor OCS; ii) exposure to both ACEs and OCS vis-à-vis exposure to ACEs alone; and iii) exposure to OCS but not to ACEs exposure to neither ACEs nor OCS.

| Test | | | | |
| --- | --- | --- | --- | --- |
| **Contrast** | **Estimate** | **SE** | **t value** | **p value** |
| ACE Vs. Neither | -0.197 | 0.0666 | -2.96 | 0.0031066 |
| ACE + OCS Vs. ACE only | -0.153 | 0.0589 | -2.60 | 0.0092835 |
| OCS Vs. Neither | -0.239 | 0.0595 | -4.03 | 0.0000583 |

* Predicted self-reported scores together with 95% CIs for each group are provided bellow.

| Predicted values | | | | |
| --- | --- | --- | --- | --- |
| **Group** | **Est.** | **SE** | **2.5%** | **97.5%** |
| None | 3.87 | 0.0449 | 3.78 | 3.95 |
| ACE | 3.67 | 0.0492 | 3.57 | 3.77 |
| ACE + OCS | 3.52 | 0.0324 | 3.45 | 3.58 |
| OCS | 3.63 | 0.0390 | 3.55 | 3.70 |

* In addition to balancing the background characteristics across groups using weights, we can further adjust the comparison through regression. The resulting estimates are “doubly robust”, in the sense of being correct if either the model to develop the weight or the regression model is correct but not necessarily both.
* The results using doubly robust estimates are provided below and are very similar to those already presented.

| Test (Doubly robust) | | | | |
| --- | --- | --- | --- | --- |
| **Contrast** | **Estimate** | **SE** | **t value** | **p value** |
| ACE Vs. Neither | -0.216 | 0.0732 | -2.96 | 0.003159 |
| ACE + OCS Vs. ACE only | -0.139 | 0.0639 | -2.18 | 0.029611 |
| OCS Vs. Neither | -0.230 | 0.0627 | -3.66 | 0.000253 |

| Predicted values (Doubly robust) | | | | |
| --- | --- | --- | --- | --- |
| **Group** | **Est.** | **SE** | **2.5%** | **97.5%** |
| None | 3.80 | 0.0727 | 3.66 | 3.95 |
| ACE | 3.59 | 0.0863 | 3.42 | 3.76 |
| ACE + OCS | 3.45 | 0.0655 | 3.32 | 3.58 |
| OCS | 3.57 | 0.0753 | 3.43 | 3.72 |