

## Adverse Childhood Experiences (ACE) Questionnaire

### ***During your first 18 years of life:***

1. Did you live with anyone who was a problem drinker or alcoholic?<sup>a</sup>
2. Did you live with anyone who used street drugs?<sup>a</sup>
3. Was anyone in your household depressed or mentally ill?<sup>a</sup>
4. Did anyone in your household attempt to commit suicide?<sup>a</sup>
5. Were your parents ever separated or divorced?<sup>a</sup>
6. Did anyone in your household ever go to prison?<sup>a</sup>

### ***While you were growing up, during your first 18 years of life:***

7. You didn't have enough to eat.<sup>b</sup>
8. You knew there was someone to take care of you and protect you.<sup>b\*</sup>
9. Your parents were too drunk or high to take care of the family.<sup>b</sup>
10. You had to wear dirty clothes.<sup>b</sup>
11. There was someone to take you to the doctor if you needed it.<sup>b\*</sup>
12. There was someone in your family who helped you feel important or special.<sup>b\*</sup>
13. You felt loved.<sup>b\*</sup>
14. People in your family looked out for each other.<sup>b\*</sup>
15. People in your family felt close to each other.<sup>b\*</sup>
16. Your family was a source of strength and support.<sup>b\*</sup>

### ***Sometimes parents or other adults hurt children. While you were growing up, during your first 18 years of life, how often did a parent, stepparent, or adult living in your home:***

17. Swear at you, insult you, or put you down?<sup>c</sup>
18. Act in a way that made you afraid that you might be physically hurt?<sup>c</sup>
19. Actually push, grab, shove, slap you or throw something at you?<sup>c</sup>
20. Hit you so hard that you had marks or were injured?<sup>c</sup>

### ***Sometimes physical blows occur between parents. While you were growing up in your first 18 years of life, how often did your father (or stepfather) or mother's boyfriend do any of these things to your mother (or stepmother)?***

21. Push, grab, slap or throw something at her?<sup>c</sup>
22. Kick, bite, hit her with a fist, or hit her with something hard?<sup>c</sup>
23. Repeatedly hit her over at least a few minutes?<sup>c</sup>
24. Threaten her with a knife or a gun, or use a knife or gun to hurt her?<sup>c</sup>

### ***Some people, while growing up in their first 18 years of life, had a sexual experience with an adult or someone at least five years older than themselves. These experiences may have involved a relative family friend or stranger. During the first 18 years of life, did an adult or older relative, family friend or stranger ever:***

25. Touch or fondle your body in a sexual way?<sup>a</sup>
26. Have you touch their body in a sexual way?<sup>a</sup>
27. Attempt to have any type of sexual intercourse (oral, anal, or vaginal) with you?<sup>a</sup>
28. Actually have any type of sexual intercourse with you (oral, anal, or vaginal) with you?<sup>a</sup>

<sup>a</sup> Dichotomous scale; yes/no

<sup>b</sup> Likert-type scale; never true (1), rarely true (2), sometimes true (3), often true (4), very often true (5)

<sup>c</sup> Likert-type scale; never, once or twice, sometimes, often, very often

\* Reverse scored

## Scoring:

**Emotional abuse** was coded as present if participants responded *often* or *very often* to item 17 and/or *sometimes, often, or very often* to item 18.

**Physical abuse** was coded as present if participants responded *often* or *very often* to item 19 and/or item 20.

**Sexual abuse** was coded as present if participants responded *yes* to any of items 25, 26, 27, or 28.

**Emotional neglect** was scored by summing the ratings of items 12, 13, 14, 15, and 16 (after reverse scoring items). Emotional neglect was coded as present if participants scored  $\geq 15$  on the summed score.

**Physical neglect** was scored by summing the ratings of items 7, 8, 9, 10, and 11 (after reverse scoring items 8 and 11). Physical neglect was coded as present if participants scored  $\geq 10$  on the summed score.

**Problematic substance use in household** was coded as present if participants responded *yes* to item 1 and/or item 2.

**Mental illness in household** was coded as present if participants responded *yes* to item 3 and/or item 4.

**Physical violence between parents** was coded as present if participants responded *sometimes, often, or very often* to item 21 and/or item 22 and/or *once or twice, sometimes, often, or very often* to item 23 and/or item 24.

**Household member in prison** was coded as present if participants responded *yes* to item 6.

**Parents separated/divorced** was coded as present if participants responded *yes* to item 5.

Scoring procedures were based on the following articles from the original ACE Study:

Anda RF, Felitti VJ, Bremner JD, Walker JD, Whitfield C, Perry BD, Dube SR, Giles WH. The enduring effects of abuse and related adverse experiences in childhood: A convergence of evidence from neurobiology and epidemiology. *Eur Arch Psychiatry Clin Neurosci* 2006;256:174–186.

Dong M, Dube SR, Felitti VJ, Giles WH, Anda RF. Adverse childhood experiences and self-reported liver disease: New insights into the causal pathway. *Arch Intern Med*. 2003;163:1949–1956.

## Supplemental Digital Content 2

### Supplementary Table

Physical and mental health characteristics of the parent sample ( $N = 170$ )

Variable	<i>n</i>	% or <i>M (SD)</i>
Chronic pain status, % with chronic pain	85	50.0
Chronic pain locations, % from chronic pain sample		
Muscles and joints	45	52.9
Head	40	47.1
Other	30	35.3
Legs	20	23.5
Stomach	7	8.2
Chest	6	7.1
Depressive symptoms, <i>M (SD)</i> out of 21	-	3.31 (3.43)
Clinically-elevated symptoms, % meeting cut-off	21	12.4
Anxiety symptoms, <i>M (SD)</i> out of 21	-	6.04 (3.79)
Clinically-elevated symptoms, % meeting cut-off	58	34.1
PTSD symptoms, <i>M (SD)</i> out of 80	-	9.63 (11.06)
Clinically-elevated symptoms, % meeting cut-off	6	3.5

*Note.* Chronic pain status was assessed with a single dichotomous (yes/no) item that asked about the presence of pain for at least 3 months in a row; Pain locations were assessed with a single item that asked parents with chronic pain to select the location(s) of their pain from a checklist of six options; Respondents were able to select more than one pain location; Depressive and anxiety symptoms were assessed with the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983); As suggested by research (Bjelland et al., 2002), a cut-off score of 8 or more on each subscale was used to identify clinically-elevated depressive or anxiety symptoms; PTSD symptoms were assessed with the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013); As suggested by the developers, a cut-off score of 33 or more was used to identify clinically-elevated PTSD symptoms.