

Supplemental Information

SUPPLEMENTAL TABLE 4 CRCS Items Used to Construct PCE Category Binary Indicators		
Category	Item Language	Approach to Measure
Able to confide in parents	<ol style="list-style-type: none"> 1. Before you were age 17 y, how much could you confide in your mother about things that were bothering you? 2. Before you were age 17 y, how much could you confide in your father about things that were bothering you? 	A score of "a lot" or "some" for either question led to this category being coded as positive. Options: A lot/some/a little/not at all
Parents understood their problems	<ol style="list-style-type: none"> 1. Before you were age 17 y, how did your (mother/stepmother/the woman who raised you) understand your problems and worries? 2. Before you were age 17 y, how much did your (father/stepfather/the man who raised you) understand your problems and worries? 	A score of a lot or some for either question led this category to being coded as positive. Options: A lot/some/a little/not at all
Positive relationship with their parents	<ol style="list-style-type: none"> 1. Before you were age 17 y, how would you rate your relationship with (your mother/your stepmother/the woman who raised you)? 2. Before you were age 17 y, how would you rate your relationship with (your father/your stepfather/the man who raised you)? 	A score of excellent or very good on either question led to this category being coded as positive. Options: Excellent/very good/good/fair/poor
Happy at school	<ol style="list-style-type: none"> 1. When you were between age ages 6 and 12 y, how often did you feel happy at school? 2. When you were between ages 13 and 16 y, how often did you feel happy at school? 	A score of a lot on both questions led to this category being coded as positive. Options: A lot/sometimes/rarely/never
Comfortable around a group of friends	<ol style="list-style-type: none"> 1. When you were between ages 6 and 12 y, how often did you have a group of friends you felt comfortable spending time with? 2. When you were between ages 13 and 17 y, how often did you have a group of friends you felt comfortable spending time with? 	A score of often on both questions led this category to being coded as positive. Options: Often/sometimes/not very often/never
Neighborhood support	<ol style="list-style-type: none"> 1. Think back to the neighborhood in which you lived the longest when you were between ages 6 and 12 y. How true is the following statement about this neighborhood? "My neighbors were willing to help each other out." 2. Think back to the neighborhood in which you lived the longest when you were between ages 13 and 16 y. How true is the following statement about this neighborhood? "My neighbors were willing to help each other out." 	A score of "very true" on both questions led to this category being coded as positive. Options: Very true/somewhat true

SUPPLEMENTAL TABLE 5 Distribution of Individual Domains Within PCE Score	
Category	Percentage
Able to confide in parents	75.6
Parents understood their problems	83.4
Positive relationship with their parents	77.9
Happy at school	47.0
Comfortable around a group of friends	81.2
Neighborhood support	64.0

SUPPLEMENTAL TABLE 6 Panel Study of Income Dynamics Questionnaire Items Used to Construct Adult Health Outcomes: Diagnosis

Category	Item Language	Approach to Measuring Diagnosis
Overall health status: Fair/poor	Would you say your health in general is excellent, very good, good, fair, or poor?	A score of fair or poor led to this category being coded as positive.
Physical health outcomes		
Asthma	Has a doctor or other health professional ever told you that you had asthma?	A score of "yes" led to this category being coded as positive.
Hypertension	Has a doctor or other health professional ever told you that you had high blood pressure or hypertension?	A score of yes led to this category being coded as positive.
Diabetes	Has a doctor or other health professional ever told you that you had diabetes?	A score of yes led to this category being coded as positive.
Coronary heart disease, angina, heart failure	Has a doctor or other health professional ever told you that you had coronary heart disease, angina, congestive heart failure?	A score of yes led to this category being coded as positive.
Heart attack	Has a doctor or other health professional ever told you that you had a heart attack?	A score of yes led to this category being coded as positive.
Stroke	Has a doctor or other health professional ever told you that you had a stroke?	A score of yes led to this category being coded as positive.
Lung disease	Has a doctor or other health professional ever told you that you had chronic lung disease such as bronchitis or emphysema?	A score of yes led to this category being coded as positive.
Cancer	Has a doctor or other health professional ever told you that you had cancer or a malignant tumor?	A score of yes led to this category being coded as positive.
Arthritis	Has a doctor or other health professional ever told you that you had arthritis or rheumatism?	A score of yes led to this category being coded as positive.
Memory loss	Has a doctor or other health professional ever told you that you had permanent loss of memory or mental ability?	A score of yes led to this category being coded as positive.
Any physical illness	See above for asthma, hypertension, diabetes, cardiovascular disease, heart attack, stroke, lung disease, cancer, and arthritis.	This category was coded as positive if the respondent indicated yes to any of the following: asthma, hypertension, diabetes, cardiovascular disease, heart attack, stroke, lung disease, cancer, or arthritis.
Any cardiovascular condition	See above for hypertension, cardiovascular disease, stroke, and heart attack.	This category was coded as positive if the respondent indicated yes to any of the following: hypertension, cardiovascular disease, stroke, or heart attack.
Mental health outcomes		
Any psychiatric problem	Has a doctor or other health professional ever told you that you had any emotional, nervous, or psychiatric problem?	A score of yes led to this category being coded as positive.
Anxiety	What was the diagnosis? What is the emotional/psychiatric disorder?	A response of "anxiety (panic)" during mentions 1, 2, or 3 led to this category being coded as positive.
Depression	What was the diagnosis? What is the emotional/psychiatric disorder?	A response of depression during mentions 1, 2, or 3 led to this category being coded as positive.
Bipolar depression	What was the diagnosis? What is the emotional/psychiatric disorder?	A response of "bipolar disorder" during mentions 1, 2, or 3 led to this category being coded as positive.

SUPPLEMENTAL TABLE 7 Panel Study of Income Dynamics Questionnaire Items Used to Construct Adult Health Outcomes: Age at Diagnosis		
Category	Item Language	Approach to Measuring Diagnosis
Asthma	How old were you when you were first diagnosed with asthma?	Response was used.
Hypertension	How old were you when you were first diagnosed with high blood pressure or hypertension?	Response was used.
Diabetes	How old were you when you were first diagnosed with diabetes?	Response was used.
Coronary heart disease, angina, heart failure	How old were you when you were first diagnosed with this condition (coronary heart disease, angina, heart failure)?	Response was used.
Heart attack	How old were you the first time you had a heart attack?	Response was used.
Stroke	How old were you the first time you had a stroke?	Response was used.
Lung disease	How old were you when you were first diagnosed with (lung disease/bronchitis/emphysema)?	Response was used.
Cancer	How old were you when you were first diagnosed with cancer?	Response was used.
Arthritis	How old were you when you were first diagnosed with arthritis/rheumatism?	Response was used.
Memory loss	How old were you when you were first diagnosed with (loss of memory/mental ability)?	Response was used.
Any physical illness	See above.	This category was coded with the smallest value for age at diagnosis for the following conditions: hypertension, diabetes, cardiovascular disease, heart attack, stroke, lung disease, cancer, or arthritis. Of note, we only considered asthma if it was diagnosed at 18 y or older.
Any cardiovascular condition	See above for hypertension, cardiovascular disease, stroke, and heart attack.	This category was coded with the smallest value for age at diagnosis for the following conditions: hypertension, cardiovascular disease, stroke, or heart attack.
Mental health outcomes		
Any psychiatric problem	How old were you when you were first diagnosed?	Response was used.

SUPPLEMENTAL TABLE 8 Frequency of Adult Health Outcomes by PCEs						
Outcome	Response	N	Total	PCEs		
				0–2	3–4	5–6
Self-reported health	Excellent, very good, or good	6545	87.4%	84.2%	86.0%	89.4%
	Fair or poor	870	12.6%	15.8%	14.0%	10.6%
Asthma	No	6514	88.4%	84.1%	86.9%	90.7%
	Yes	894	11.6%	15.9%	13.1%	9.3%
Lung disease	No	7007	94.1%	92.7%	94.2%	94.5%
	Yes	400	5.9%	7.3%	5.8%	5.5%
Diabetes	No	6552	87.5%	87.6%	87.7%	87.3%
	Yes	856	12.5%	12.4%	12.3%	12.7%
Cardiovascular disease	No	7044	94.2%	95.9%	94.2%	93.7%
	Yes	362	5.8%	4.1%	5.8%	6.3%
Hypertension	No	4908	65.1%	69.7%	66.4%	62.9%
	Yes	2499	34.9%	30.3%	33.6%	37.2%
Heart attack	No	7119	95.4%	96.3%	95.3%	95.2%
	Yes	291	4.6%	3.7%	4.8%	4.8%
Stroke	No	7161	96.5%	95.6%	97.7%	96.0%
	Yes	248	3.5%	4.4%	2.3%	3.5%
Cancer	No	6850	90.3%	90.1%	91.0%	89.8%
	Yes	558	9.7%	9.9%	9.0%	10.2%
Any psychiatric problem	No	4171	86.0%	75.6%	84.9%	90.0%
	Yes	585	14.0%	24.4%	15.1%	10.0%
Anxiety	No	6867	94.5%	91.1%	93.1%	96.3%
	Yes	335	5.6%	8.9%	7.0%	3.7%
Depression	No	6785	93.6%	89.1%	92.7%	95.5%
	Yes	417	6.4%	10.9%	7.4%	4.5%
Arthritis	No	5887	76.3%	73.6%	76.7%	76.9%
	Yes	1517	23.7%	26.4%	23.3%	23.1%

SUPPLEMENTAL TABLE 9 Association Between PCE Score and Adult Physical Health Outcomes

		PCEs, aRRRs (95% CI)			ACEs, aRRRs (95% CI)		
		5–6 PCEs	3–4 PCEs	0–2 PCEs (Reference)	0 ACEs (Reference)	1–2 ACEs	3+ ACEs
Asthma	PCEs only	0.75**	0.94	1.00	—	—	—
	(n = 7175)	(0.61–0.88)	(0.78–1.11)	—	—	—	—
	ACEs + PCEs	0.76*	0.90	1.00	1.00	1.25*	1.55***
	(n = 6449)	(0.59–0.94)	(0.69–1.10)	—	—	(1.01–1.48)	(1.22–1.89)
Arthritis	PCEs only	0.84**	0.97	1.00	—	—	—
	(n = 7170)	(0.74–0.94)	(0.84–1.09)	—	—	—	—
	ACEs + PCEs	0.99	1.07	1.00	1.00	1.11	1.38***
	(n = 6445)	(0.82–1.16)	(0.88–1.26)	—	—	(0.98–1.25)	(1.18–1.58)
Hypertension	PCEs only	1.10*	1.10	1.00	—	—	—
	(n = 7174)	(1.00–1.20)	(0.99–1.20)	—	—	—	—
	PCEs + ACEs	1.07	1.05	1.00	1.00	1.02	1.138
	(n = 6449)	(0.93–1.21)	(0.91–1.20)	—	—	(0.93–1.10)	(1.02–1.26)
Diabetes	PCEs only	0.93	0.95	1.00	—	—	—
	(n = 7174)	(0.76–1.10)	(0.76–1.13)	—	—	—	—
	PCEs + ACEs	1.02	1.06	1.00	1.00	1.15	1.20
	(n = 6448)	(0.76–1.28)	(0.78–1.34)	—	—	(0.95–1.35)	(0.94–1.47)
Coronary heart disease, angina, or heart failure	PCEs only	1.14	1.21	1.00	—	—	—
	(n = 7173)	(0.76–1.52)	(0.78–1.63)	—	—	—	—
	PCEs + ACEs	1.19	1.15	1.00	1.00	1.15	1.36
	(n = 6450)	(0.67–1.72)	(0.62–1.68)	—	—	(0.80–1.50)	(0.85–1.86)
Heart attack	PCEs only	1.00	1.08	1.00	—	—	—
	(n = 7176)	(0.64–1.356)	(0.67–1.49)	—	—	—	—
	PCEs + ACEs	1.00	0.97	1.00	1.00	1.26	1.76*
	(n = 6450)	(0.57–1.43)	(0.53–1.41)	—	—	(0.94–1.69)	(1.04–2.48)
Stroke	PCEs only	0.80	0.65*	1.00	—	—	—
	(n = 7176)	(0.53–1.07)	(0.41–0.90)	—	—	—	—
	PCEs + ACEs	0.74	0.58*	1.00	1.00	1.06	1.08
	(n = 6451)	(0.41–1.06)	(0.30–0.85)	—	—	(0.68–1.45)	(0.60–1.57)
Lung disease	PCEs only	0.81	0.90	1.00	—	—	—
	(n = 7175)	(0.60–1.03)	(0.65–1.15)	—	—	—	—
	PCEs + ACEs	0.97	0.97	1.00	1.00	1.31	1.73**
	(n = 6449)	(0.61–1.33)	(0.60–1.34)	—	—	(0.92–1.71)	(1.14–2.31)
Cancer	PCEs only	0.89	0.88	1.00	—	—	—
	(n = 7174)	(0.68–1.09)	(0.66–1.10)	—	—	—	—
	PCEs + ACEs	0.96	0.96	1.00	1.00	1.05	1.10
	(n = 6448)	(0.66–1.26)	(0.64–1.27)	—	—	(0.84–1.26)	(0.80–1.39)
Anxiety	PCEs only	0.62**	0.92	1.00	—	—	—
	(n = 6970)	(0.44–0.79)	(0.66–1.18)	—	—	—	—
	ACEs + PCEs	0.92	1.22	1.00	1.00	1.51*	2.23***
	(n = 6266)	(0.60–1.3)	(0.80–1.63)	—	—	(0.99–2.03)	(1.42–3.05)
Depression	PCEs only	0.50***	0.71**	1.00	—	—	—
	(n = 6970)	(0.38–0.62)	(0.53–0.88)	—	—	—	—
	ACEs + PCEs	0.63**	0.76	1.00	1.00	1.74***	2.43***
	(n = 6266)	(0.44–0.81)	(0.54–0.97)	—	—	(1.18–2.31)	(1.59–3.28)
Any CV condition (CHD, HTN, MI, stroke)	PCEs only	1.05	1.06	1.00	—	—	—
	(n = 7177)	(0.96–1.14)	(0.97–1.16)	—	—	—	—
	PCEs + ACEs	1.03	1.02	1.00	1.00	1.03	1.15**
	(n = 6461)	(0.90–1.15)	(0.89–1.15)	—	—	(0.95–1.11)	(1.04–1.27)

The treatment model included continuous age, sex, a 5-category race/ethnicity measure, educational attainment, health insurance, and income as measured by percentage of federal poverty level. Statistical significance is indicated at the 5% level: * $P < .05$; ** $P < .01$; *** $P < .001$. ACEs, adverse childhood experiences; aRRR, adjusted relative risk reduction; CHD, coronary heart disease; CV, cardiovascular; HTN, hypertension; MI, myocardial infarction; PCEs, positive childhood experiences.

SUPPLEMENTAL TABLE 10 Association Between PCEs and ACEs and Adult Health Outcomes: Interacted Model						
	Any Physical or Psychiatric Condition		Any Physical Condition		Any Psychiatric Condition	
	Coef.	95% CI	Coef.	95% CI	Coef.	95% CI
PCE score						
0–2 PCEs	1.00	—	1.00	—	1.00	—
3–4 PCEs	0.56*	(0.34–0.94)	0.67	(0.40–1.12)	0.60	(0.29–1.23)
5–6 PCEs	0.44***	(0.27–0.71)	0.52**	(0.32–0.84)	0.33***	(0.16–0.65)
ACE score						
0 ACEs	1.00	—	1.00	—	1.00	—
1–2 ACEs	0.69	(0.40–1.18)	0.68	(0.39–1.16)	0.96	(0.46–2.03)
3+ ACEs	0.98	(0.58–1.67)	0.88	(0.52–1.48)	1.97	(0.98–3.95)
PCE-by-ACE						
0–2 PCEs by 0 ACEs	1.00	—	1.00	—	1.00	—
3–4 PCEs by 1–2 ACEs	1.60	(0.88–2.92)	1.50	(0.82–2.74)	1.445	(0.63–3.37)
3–4 PCEs by 3+ ACEs	2.16*	(1.16–4.02)	2.14*	(1.15–3.97)	1.02	(0.45–2.33)
5–6 PCEs by 1–2 ACEs	2.20**	(1.24–3.88)	1.96*	(1.11–3.47)	2.77*	(1.23–6.22)
5–6 PCEs by 3+ ACEs	1.83	(0.99–3.38)	2.10*	(1.15–3.87)	1.11	(0.49–2.55)

Covariates in the treatment model included continuous age, sex, a 5-category race/ethnicity measure, educational attainment, health insurance, and income as measured by percentage of federal poverty level. Statistical significance is indicated at the 5% level: * $P < .05$; ** $P < .01$; *** $P < .001$. Coef., coefficient. —, not applicable.

SUPPLEMENTAL TABLE 11 Unadjusted, Survey-Weighted Age at Diagnosis According to PCE and ACE Score: Percentiles							
		PCEs			ACEs		
		5–6	3–4	0–2	0	1–2	3+
Any condition: Physical or psychiatric	25th	40	35	30	43	39	32
	50th	54	50	47	55	52	48
	75th	66	64	61	66	65	62
Any physical condition	25th	40	38	35	41	35	28
	50th	55	50	50	55	50	44
	75th	67	65	63	66	65	60
Any psychiatric condition	25th	24	20	20	25	22	18
	50th	32	33	31	35	32	28
	75th	51	45	44	46	45	39