

Supplemental Information

Measurement Details for Mediators

Child School Disengagement

In line with prior MCS research,¹⁷ we constructed a 6-item index of child school disengagement at S5. Items were drawn from the child self-completion questionnaire and include the following: (1) How often do you try your best at school?, (2) How often do you find school interesting?, (3) How often do you feel unhappy at school? (reverse-coded), (4) How often do you get tired at school? (reverse-coded), (5) How often do you feel school is a waste of time? (reverse-coded), and (6) How often do you misbehave or cause trouble in class? (reverse-coded). Response options included (1) all of the time, (2) most of the time, (3) some of the time, and (4) never. Items were coded so that higher scores reflect disengagement from school. Ultimately, scores were averaged into a school disengagement index ($\alpha = 0.74$).

Child Externalizing Behavior

To capture youths' externalizing behavior during middle childhood (S5), we used 10 parent-reported items used in prior MCS research.^{17,40} The items are derived from both the

conduct problems and hyperactivity/inattentive subscales of the Strength and Difficulties Questionnaire, a scale with good reliability that has been widely validated as a screening tool to capture self-regulatory and externalizing difficulties.⁴¹ Conduct problems include items pertaining to fighting, lying, cheating, stealing, and other misbehaviors, whereas hyperactivity/inattentive items include items pertaining to overactivity as well as deficits in concentration, impulse control, planning, attention, and persistence. Response options included (1) not true, (2) somewhat true, and (3) certainly true. Items were coded in the direction of risk and averaged into an index, with higher scores reflecting more evidence of externalizing behavior during middle childhood ($\alpha = 0.80$).

Child Property Delinquency

In line with prior research,^{17,42} we constructed a binary item derived from the S5 child self-completion questionnaire regarding whether youth had participated in any of the following 3 activities in their final year of primary school (ie, ~11 years of age): (1) taken something from a shop without paying for it;

(2) written things or sprayed paint on a building, fence, train, or anywhere else where you shouldn't have; and/or (3) on purpose damaged anything in a public place that didn't belong to you, for example by burning, smashing or breaking things like cars, bus shelters, and rubbish bins? Because of the low rates of property delinquency at this age, and in accordance with prior research,^{17,42} we collapsed all 3 items into a single binary indicator of child property delinquency (S5).

Child Substance Use

Finally, in line with prior research,^{17,22,42} we constructed a binary item derived from the S5 child self-completion questionnaire regarding whether youth had participated in either of the following 2 activities in their final year of primary school (ie, ~11 years of age): (1) tried a cigarette (even if it was only a single puff) and/or (2) had an alcohol drink (more than a few sips). Because of the low rates of substance use at this age, and in accordance with prior research,^{17,22,42} we collapsed these 2 items into a single binary indicator of child substance use (S5).

SUPPLEMENTAL TABLE 4 Description of Adverse Childhood Experiences at Ages 5 and 7^a

- Verbal maltreatment (ages 5 and 7 years): the main respondent was questioned about “How often shouts at child when naughty? Daily, often (about once a week or more), sometimes (once a month), rarely, or never.” Dichotomized: daily, often vs sometimes/rarely/never [Ref].
- Physical maltreatment (ages 5 and 7 years): the main respondent was questioned about “How often smacks the child when naughty? Daily, often (about once a week or more), sometimes (once a month), rarely, or never.” Dichotomized: daily, often vs sometimes/rarely/never [Ref].
- Parental divorce (ages 5 and 7 years): the main responder was asked about marital status to identify occurrence of divorce or legal separation (“Divorced, legally separated, first marriage, remarried, second or later married, single, never married, or widowed”). Dichotomized: divorced/legally separated vs single/widowed/married [Ref].
- Parental mental illness (ages 5 and 7 years): Kessler 6 (K6)^b scale was used to assess maternal mental health in the last month asking the responders how often they felt depressed, hopeless, restless or fidgety, worthless, or that everything was an effort. Respondents answered on a 5-point scale from 1 (all the time) to 5 (none of the time). We reversed and rescaled all items from 0 to 4 for analysis purposes, so that high scores indicate higher levels of psychological distress. We used validated cutoffs for severe mental illness (“yes [scores ≥ 13]/no”).
- High frequency of parental alcohol use (ages 5 and 7 years): The main respondent answered a question about their usual frequency of alcohol consumption (“Every day, 5-6 times per week, 3-4 times per week, 1-2 times per week, 1-2 times per month, less than once a month, or never.”). Dichotomized: every day and 5-6 times per week vs 3-4 times per week/1-2 times per week/1-2 times per month/less than once a month/never [Ref].
- Domestic violence (ages 5 and 7 years): The main respondent was asked about the use of force by the partner in the relationship (“yes, no”). Dichotomized: yes vs no.
- Parental drug use (age 5 years):^c The main respondent was asked about the use of recreational drugs in the past 12 months (“regularly, occasionally, cannot define, or never”). Dichotomized: regularly vs occasionally/cannot define/never [Ref].

[Ref], reference category.

^aAdapted from Straatmann et al.²⁶

^bKessler et al.⁴⁵

^cThis item was not assessed at age 7 (S4) because it was not available.

SUPPLEMENTAL TABLE 5. Descriptive Statistics of the Final Analytic Sample ($N = 11\,313$)

	Mean	SD	Range
Outcome variables			
Adolescent police stop: none	84.0%	—	0–1
Adolescent police stop: stopped and questioned	8.3%	—	0–1
Adolescent police stop: warned/cautioned	6.7%	—	0–1
Adolescent police stop: arrested/taken into custody	1.0%	—	0–1
Independent variables			
ACE: 0	38.5%	—	0–1
ACE: 1	44.4%	—	0–1
ACE: 2	14.1%	—	0–1
ACE: 3+	3.0%	—	0–1
Covariates			
Age, y	13.8	0.5	13–15
Male	49.4%	—	0–1
Race: White	79.9%	—	0–1
Race: Asian	10.8%	—	0–1
Race: Black	3.2%	—	0–1
Race: Mixed	4.7%	—	0–1
Race: Other	1.4%	—	0–1
Mother's age at birth, y	29.1	5.8	13–51
Parent education NVQ 1	7.3%	—	0–1
Parent education: NVQ 2	27.0%	—	0–1
Parent education: NVQ 3	14.7%	—	0–1
Parent education: NVQ 4	31.8%	—	0–1
Parent education: NVQ 5	4.6%	—	0–1
Parent education: Other	3.2%	—	0–1
Parent education: none	11.6%	—	0–1
Household poverty	31.2%	—	0–1
Household size	4.2	1.3	2–17
Low neighborhood safety	1.8	0.9	1–5
Mediators			
Child school disengagement	1.7	0.5	1–4
Child externalizing behavior	1.4	0.4	1–3
Child property delinquency	7.6%	—	0–1
Child substance use	12.8%	—	0–1

—, not applicable.

SUPPLEMENTAL TABLE 6 Full Adjusted Logistic Regression Model of the Association Between ACEs and Adolescent Police Stops

Variables	Adolescent Police Stops	
	AOR	CI
Number of adverse childhood experiences		
1	1.3**	1.1–1.5
2	1.4**	1.2–1.7
3+	2.0**	1.5–2.7
Covariates		
Age, y	1.3**	1.1–1.5
Male	1.8**	1.6–2.0
Race: Asian (ref: White)	0.3**	0.3–0.5
Race: Black (ref: White)	1.4*	1.0–2.1
Race: Mixed (ref: White)	1.2	0.9–1.6
Race: Other (ref: White)	1.3	0.8–2.2
Mother age at birth	0.9**	0.9–1.0
Parent Education: NVQ 2 (S5) (ref: NVQ 1)	0.9	0.7–1.1
Parent Education: NVQ 3 (S5) (ref: NVQ 1)	0.7**	0.6–0.9
Parent Education: NVQ 4 (S5) (ref: NVQ 1)	0.5**	0.4–0.7
Parent Education: NVQ 5 (S5) (ref: NVQ 1)	0.5**	0.3–0.8
Parent Education: Other (S5) (ref: NVQ 1)	1.0	0.7–1.5
Parent Education: None (S5) (ref: NVQ 1)	1.2	0.9–1.5
Household poverty	1.4**	1.2–1.6
Household size	1.1**	1.1–1.2
Low neighborhood safety	1.1**	1.1–1.2

AOR, adjusted odds ratio.

* $P < .05$; ** $P < .01$.

SUPPLEMENTAL TABLE 7 Full Adjusted Logistic Regression Model of the Association Between ACEs and Adolescent Police Stop Features

Variables	Police Stop Features					
	Stopped and Questioned		Warned/ Cautioned		Arrested/Taken Into Custody	
	ARRR	CI	ARRR	CI	ARRR	CI
Adverse childhood experiences						
1	1.2*	1.0–1.5	1.3**	1.1–1.6	1.5	0.8–2.6
2	1.1	0.8–1.4	1.8**	1.4–2.3	2.5**	1.3–4.7
3+	1.3	0.8–2.0	2.9**	1.9–4.4	4.0**	1.7–9.6
Covariates						
Age, y	1.3*	1.1–1.6	1.2	1.0–1.4	2.2*	1.2–4.2
Male	1.7**	1.4–2.0	1.9**	1.6–2.3	1.6*	1.0–2.6
Race: Asian (ref: White)	0.4**	0.3–0.6	0.3**	0.2–0.4	0.6	0.2–1.5
Race: Black (ref: White)	1.6*	1.0–2.5	1.3	0.7–2.3	1.3	0.4–4.2
Race: Mixed (ref: White)	1.2	0.9–1.8	1.2	0.8–1.7	1.8	0.8–3.9
Race: Other (ref: White)	1.5	0.8–2.7	1.3	0.6–2.7	0.2	0.00–1.3
Mother's age at birth	1.0**	0.9–1.0	0.9**	0.9–0.9	0.9**	0.9–1.0
Parent education: NVQ 2 (S5) (Ref: NVQ 1)	0.8	0.6–1.1	0.9	0.6–1.2	1.9	0.7–4.7
Parent education: NVQ 3 (S5) (Ref: NVQ 1)	0.7*	0.5–1.00	0.7*	0.5–1.0	1.1	0.4–3.1
Parent education: NVQ 4 (S5) (Ref: NVQ 1)	0.6**	0.4–0.8	0.4**	0.3–0.6	0.5	0.2–1.4
Parent education: NVQ 5 (S5) (Ref: NVQ 1)	0.7	0.4–1.1	0.3**	0.1–0.6	1.2	0.3–5.0
Parent education: other (S5) (Ref: NVQ 1)	1.0	0.6–1.6	1.0	0.6–1.8	1.2	0.7–1.5
Parent education: none (S5) (Ref: NVQ 1)	1.0	0.7–1.4	1.3	0.9–1.8	2.7	1.0–7.2
Household poverty	1.1	0.9–1.4	1.6**	1.3–2.0	2.1*	1.1–4.0
Household size	1.1**	1.0–1.2	1.1**	1.1–1.2	1.3**	1.1–1.5
Low neighborhood safety	1.1	1.0–1.2	1.2**	1.1–1.3	1.2	0.9–1.5

ARRR, adjusted relative risk ratio.

* $P < .05$; ** $P < .01$.

SUPPLEMENTAL TABLE 8 Interactions Between ACEs, Youth Sex, and Youth Race in the Prediction of Police Stops

	B	SE
Interaction terms		
ACEs × youth sex (male = 1)	0.01	0.03
ACEs × Asian	0.04	0.03
ACEs × Black	0.02	0.02
ACEs × Mixed race	−0.01	0.02
ACEs × Other race	−0.02	0.02

Estimates presented with 2 decimal places to facilitate ease of interpretation of results. Includes adjustment for the following covariates: adolescent age (self-report in years; S6), sex (male = 1; self-report; S6), race (Asian, Black, Mixed, and Other, with White as reference category; self-report; S6), mother's age at birth (parent reported, S2), parent education based on NVQ (NVQ1 [reference category], NVQ2, NVQ3, NVQ4, NVQ5, overseas or other education, and none; parent reported; S2), household poverty (McClements below 60% median poverty indicator; parent reported; S2), household size (ie, number of persons residing in focal child's household; parent reported; S2), and low neighborhood safety (ie, parent-reported perceptions of safety of their neighborhood, from [1] very safe to [5] very unsafe; S2).

REFERENCES

40. Flouri E, Ruddy A, Midouhas E. Maternal depression and trajectories of child internalizing and externalizing problems: the roles of child decision making and working memory. *Psychol Med.* 2017;47(6):1138–1148
41. He JP, Burstein M, Schmitz A, Merikangas KR. The Strengths and Difficulties Questionnaire (SDQ): the factor structure and scale validation in U.S. adolescents. *J Abnorm Child Psychol.* 2013;41(4):583–595
42. Staff J, Whichard C, Siennick S, Maggs J. Early life risks, antisocial tendencies, and preteen delinquency. *Criminology.* 2015;53(4):677–701
43. Kessler RC, Andrews G, Colpe LJ, et al. Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychol Med.* 2002;32(6):959–976.