

Supplementary Information

Maltreatment Index Script

The MI is based on the Maltreatment Classification System (MCS) by Barnett, Manly and Cicchetti (1993) and uses a 4-point Likert scale (1 = Never) for the reporter to rate the veracity of three statements pertaining to emotional abuse, physical abuse, and neglect, respectively. The exact script is as follows: *“Have you ever experienced the following from your parent, guardian, or another trusted adult known to you? (Never, A little bit, A fair bit, All the time) - Emotional abuse: Being belittled or ridiculed; fear or intimidation; being blamed inappropriately; extreme negativity and hostility; exposure to violence; abandonment; being confined in an enclosed space; threats of violence. Physical abuse: Being physically injured in a non-accidental way: being hit; being bruised; being choked; being burnt; having bones broken. Neglect: Being left without supervision; not being given enough to eat; not having enough clothing and/or shelter; not having enough medical treatment; being exposed to weapons; being left in the care of dangerous people; being exposed to criminal activity; not being sent to school”.*

Supplementary Table S.1. Raw correlations for different raters and dimensions of maltreatment and in lower half of table, means, medians, *SDs* and minima/maxima for the Maltreatment Index according to different raters.

		Clinician			Teacher			Youth		
		EA	PA	N	EA	PA	N	EA	PA	N
Clinician	EA							.23	.31*	.12
	PA	.59*						.06	.24	.08
	N	.27*	.21*					.10	.27*	.14
Teacher	EA							.38*	.32*	.65*
	PA				.38*			.21	.04	.36*
	N				.27*	.08		-.11	.00	-.07
Youth	EA	.23	.06	.10	.38*	.21	-.11			
	PA	.31*	.22	.27*	.32*	.04	0.0	.53*		
	N	.12	.08	.14	.65*	.36*	-.07	.27*	.20*	
Mean		1.36	1.20	1.13	1.29	1.04	1.06	1.62	1.27	1.13
Median		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<i>SD</i>		.64	.46	.35	.62	.20	.27	.75	.56	.38
% > 0		27.3	17.3	12.0	20.9	4.1	5.5	47.5	21.4	10.3
Minimum		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum		3.00	3.00	3.00	4.00	2.00	3.00	4.00	3.00	3.00
Confidence										
M			2.46			2.40				
SD			.57			.65				

Note: 1 = Never maltreated. * $p < .05$ one-tail directional test; EA = emotional abuse, PA = physical abuse, N = neglect. “% > 0” = the percentage reporting any occurrence. Confidence – confidence level of reports of maltreatment; 1 = low confidence, 3 – high confidence.

Supplementary Table S.2. Regression results predicting accuracy of emotion recognition from child adjustment and maltreatment, with children on SSRIs excluded.

Predictor	B	SE	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	Chi-Square	df	<i>p</i> <
(Intercept)	.59	.07	.45	.73	69.89	1	.001
Age	.02	.003	.02	.03	68.59	1	.001
IQ	.04	.01	.02	.06	15.16	1	.001
CU traits	-.02	.01	-.04	-.01	10.52	1	.001
Conduct problems	-.003	.005	-.01	.01	.46	1	.494
ADHD	.00	.005	-.01	.01	.005	1	.946
Anxiety	.01	.01	-.01	.03	.99	1	.318
ASD	-.01	.03	-.06	.04	.22	1	.640
EA_PA	-.09	.05	-.20	.01	3.14	1	.076
Neglect	.03	.03	-.02	.08	1.77	1	.183
CU traits * EA_PA	.01	.005	.005	.02	8.38	1	.004
CU traits * Anxiety	.00	.002	-.004	.003	.05	1	.820

CU = callous-unemotional; ADHD = attention deficit hyperactivity disorder; ASD = autism spectrum disorder; EA_PA = emotional and physical abuse.

Supplementary Table S.3a. Regression results predicting accuracy of emotion recognition from child adjustment and maltreatment, controlling for age using the 2-way interactions of age with CU traits, maltreatment, and anxiety.

Parameter	B	SE	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Chi-Square	df	<i>p</i> <
(Intercept)	.40	.12	.15	.64	10.23	1.00	.001
Age	.05	.01	.03	.07	20.69	1.00	.001
IQ	.04	.01	.02	.06	16.40	1.00	.001
CU traits	-.02	.01	-.04	.00	2.76	1.00	.10
Conduct problems	.00	.01	-.01	.01	.00	1.00	.98
ADHD	.00	.01	-.01	.01	.06	1.00	.81
Anxiety	.00	.02	-.04	.05	.00	1.00	.95
ASD	-.01	.02	-.06	.03	.40	1.00	.53
EA_PA	.04	.10	-.16	.23	.14	1.00	.71
Neglect	.01	.03	-.05	.06	.05	1.00	.82
CU traits * EA_PA	.01	.01	.00	.03	7.24	1.00	.01
CU traits * Anxiety	.00	.00	.00	.00	.36	1.00	.55
EA_PA * age	-.01	.01	-.03	.00	3.15	1.00	.08
CU traits * age	.00	.00	.00	.00	.71	1.00	.40
Anxiety * age	.00	.00	.00	.00	.45	1.00	.50

CU = callous-unemotional; ADHD = attention deficit hyperactivity disorder; ASD = autism spectrum disorder; EA_PA = emotional and physical abuse.

Supplementary Table S.3b. Regression results predicting accuracy of emotion recognition from child adjustment and maltreatment, checking for the 3-way interactions of CU traits, age and maltreatment.

Predictor	B	SE	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	Chi-Square	df	<i>p</i> <
(Intercept)	.40	.13	.14	.66	8.84	1	.003
Age	.04	.01	.02	.06	13.95	1	.001
IQ	.04	.01	.02	.06	17.35	1	.001
CU traits	-.02	.01	-.04	-.01	8.97	1	.003
Conduct problems	.00	.01	-.01	.01	.05	1	.81
ADHD	.00	.01	-.01	.01	.02	1	.89
Anxiety	.01	.01	-.01	.03	.85	1	.35
ASD	-.01	.03	-.07	.05	.09	1	.75
EA_PA	.01	.13	-.25	.28	.01	1	.91
Neglect	.03	.03	-.02	.08	1.12	1	.30
CU traits * EA_PA	.02	.01	.00	.04	4.73	1	.03
CU traits * Anxiety	.00	.00	-.00	.00	.05	1	.81
EA_PA * age	-.01	.00	-.03	.01	.77	1	.38
CU traits * EA_PA*age	-.00	.00	-.00	.00	1.06	1	.30

CU = callous-unemotional; ADHD = attention deficit hyperactivity disorder; ASD = autism spectrum disorder; EA_PA = emotional and physical abuse.

Supplementary Table S.4. Regression results predicting accuracy of emotion recognition from child adjustment and maltreatment (teacher report).

Predictor	B	SE	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	Chi-Square	df	<i>p</i> <
(Intercept)	.933	.125	.689	1.177	56.130	1	.000
Age	.021	.004	.012	.030	22.369	1	.000
IQ	.043	.014	.016	.070	9.481	1	.002
CU traits	-.060	.016	-.092	-.028	13.746	1	.000
Conduct problems	.000	.008	-.016	.015	.002	1	.966
ADHD	.001	.009	-.017	.019	.009	1	.923
Anxiety	.012	.015	-.019	.042	.562	1	.454
ASD	.011	.025	-.037	.059	.200	1	.655
EA_PA	-.341	.115	-.566	-.116	8.793	1	.003
Neglect	.027	.0414	-.054	.108	.422	1	.516
CU traits * EA_PA	.041	.0123	.015	.066	9.889	1	.002
CU traits * Anxiety	-.001	.002	-.006	.003	.455	1	.500

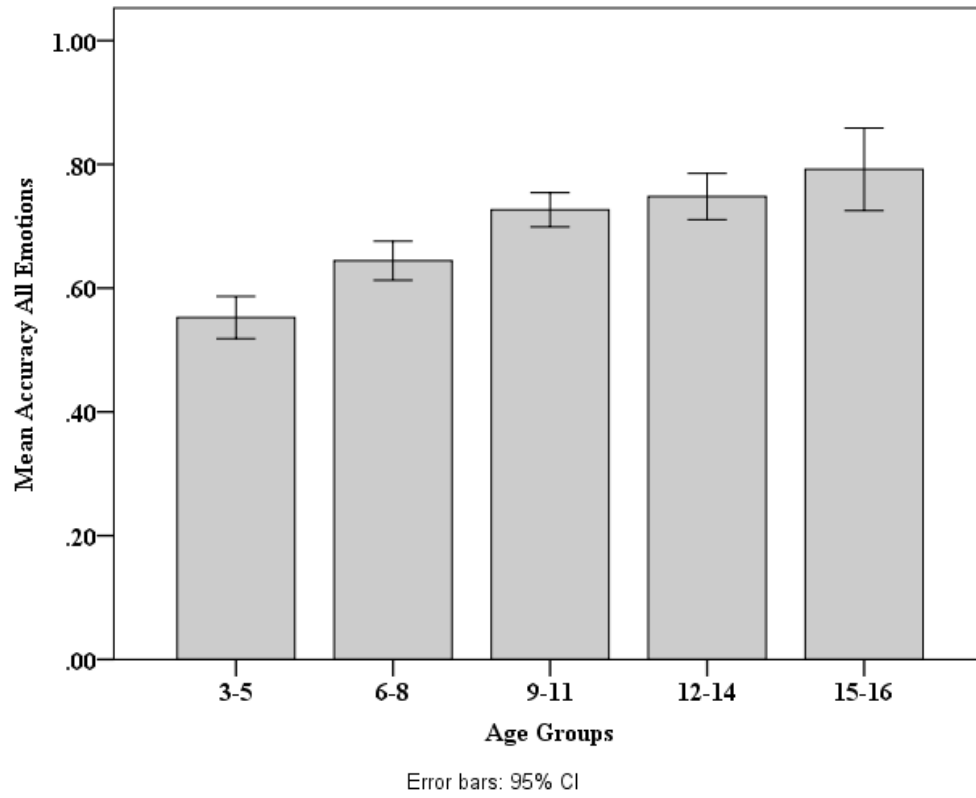
Supplementary Table S.5. Regression results predicting accuracy of emotion recognition from child adjustment and maltreatment (clinician report).

Predictor	B	SE	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	Chi-Square	df	<i>p</i> <
(Intercept)	.371	.071	.232	.511	27.183	1	.000
Age	.032	.004	.024	.041	61.479	1	.000
IQ	.058	.017	.025	.091	11.632	1	.001
CU traits	.016	.013	-.008	.041	1.683	1	.195
Conduct problems	-.004	.013	-.029	.022	.094	1	.760
ADHD	.010	.008	-.005	.026	1.717	1	.190
Anxiety	.009	.016	-.022	.041	.349	1	.555
ASD	-.079	.029	-.136	-.023	7.606	1	.006
EA_PA	.147	.085	-.020	.314	2.984	1	.084
Neglect	-.067	.049	-.163	.029	1.887	1	.170
CU traits * EA_PA	-.009	.007	-.023	.006	1.429	1	.232
CU traits * Anxiety	-.001	.003	-.007	.004	.201	1	.654

Supplementary Table S.6. Regression results predicting accuracy of emotion recognition from child adjustment and maltreatment (youth report).

Predictor	B	SE	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	Chi-Square	df	<i>p</i> <
(Intercept)	.727	.111	.509	.945	42.833	1	.000
Age	.011	.005	.001	.021	4.892	1	.027
IQ	.022	.011	.000	.044	3.999	1	.046
CU traits	-.005	.013	-.029	.020	.130	1	.718
Conduct problems	.001	.005	-.009	.011	.030	1	.862
ADHD	-.019	.006	-.032	-.007	9.736	1	.002
Anxiety	-.012	.011	-.032	.009	1.219	1	.269
ASD	.019	.014	-.009	.047	1.783	1	.182
EA_PA	-.032	.071	-.170	.106	.207	1	.649
Neglect	.038	.036	-.031	.108	1.160	1	.281
CU traits * EA_PA	-.003	.009	-.021	.015	.112	1	.738
CU traits * Anxiety	.004	.002	.001	.007	6.874	1	.009

Supplementary Figure S.1. Means and 95% confidence intervals for overall accuracy of emotion recognition across age groups. Chance correct accuracy = 20%.



Supplementary Figure S.2. Simple slopes figures for the youth maltreatment report cohort, showing the interaction between CU traits and Anxiety for accuracy of emotion recognition for all emotions, fear, sadness, anger, happy and disgust.

