

Impulsivity Profiles across Five Harmonized Longitudinal Childhood Preventive Interventions and Associations with Adult

Outcomes

Supplementary Materials

Table S1

Impulsivity Measures for Each Trial at Each Grade

Grade	PIRC1	PIRC2	LIFT	SAFE	FT
2	TOCA	TOCA	CBCL	TRF, POCA, TOCA	CBCL, TOCA
4	TOCA	-	CBCL	TRF, POCA, TOCA	CBCL, TOCA
5	TOCA	-	CBCL, TOCA	TRF, POCA, TOCA	CBCL, TOCA
7	TOCA	POCA, TOCA	-	TRF, TOCA	CBCL
8	-	POCA, TOCA	CBCL	TRF, POCA, TOCA	CBCL
10	-	TOCA	CBCL	CBCL	-

Note. CBCL = Child Behavior Checklist; FT = Fast Track; LIFT = Linking the Interest of Families and Teachers; PIRC1 = Prevention Intervention Research Center Generation 1; PIRC2 = Prevention Intervention Research Center Generation 2; POCA = Parent Observation of Classroom Adaptation-Revised; SAFE = SAFE Children; TOCA = Teacher Observation of Classroom Adaptation-Revised; TRF = Teacher’s Report Form.

Table S2

Item Wording for Impulsivity Measures

Measure	Item
POCA	Waits for turn (r) Interrupts others Blurts out answers Can't sit still Concentrates on class work (r) Pays attention (r) Stays on task (r)
TOCA	Waits for turn (r) Interrupts others Blurts out answers Can't sit still Concentrates on class work (r) Pays attention (r) Stays on task (r)
CBCL	Trouble sitting still Difficulty concentrating Does not finish tasks
TRF	Difficulty concentrating

Note. CBCL = Child Behavior Checklist; POCA = Parent Observation of Classroom Adaptation-Revised; r = reverse coded; TOCA = Teacher Observation of Classroom Adaptation-Revised; TRF = Teacher's Report Form.

Table S3

Adult Outcome Measures for Each Trial from Ages 18-21

Adult Outcomes	PIRC1	PIRC2	LIFT	SAFE	FT
Aggression	-	DIS, TOCA	CBCL, ASR	CBCL, ASR	ASR, DIS
Anxiety/depression	DIS	-	CBCL, ASR	CBCL, ASR	ASR, DIS

Note. ASR = Adult Self-Report; CBCL = Child Behavior Checklist; DIS = Diagnostic Interview Schedule; FT = Fast Track; LIFT = Linking the Interest of Families and Teachers; PIRC1 = Prevention Intervention Research Center Generation 1; PIRC2 = Prevention Intervention Research Center Generation 2; SAFE = SAFE Children; TOCA = Teacher Observation of Classroom Adaptation-Revised.

Table S4

Descriptives and Correlations among Main Study Variables – Combined Sample

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	-.03	1											
3. Baseline aggression	.21***	.09***	1										
<i>Impulsivity</i>													
4. Grade 2	.18***	.18***	.27***	1									
5. Grade 4	.16***	.33***	.25***	.56***	1								
6. Grade 5	.13***	.32***	.21***	.51***	.62***	1							
7. Grade 7	.13***	.17***	.09***	.20***	.29***	.35***	1						
8. Grade 8	.06**	.10***	.05*	.16***	.27***	.33***	.49***	1					
9. Grade 10	.18***	.01	.12**	-.05	.08	.13***	.32***	.25***	1				
<i>Outcomes</i>													
10. Aggression	.12***	-.03	.22***	.11***	.09**	.05	.08**	.04	.11**	1			
11. Substance use	.06***	-.20***	.02	-.02	-.02	-.02	.08***	.06*	.14***	.08**	1		
12. Suicidal ideation/attempts	.02	-.09***	.08***	.04*	-.03	-.00	-.01	-.04	.05	.23***	.15***	1	
13. Anxiety/depression	.02	-.10***	.19***	.10***	.03	.03	-.01	.09**	.27***	.39***	.11***	.38***	1
<i>Descriptives</i>													
<i>N</i>	4975	4593	4805	3896	3130	3846	3235	1890	721	1767	4304	3870	3018
<i>M</i>	.54	.60	.01	.74	.74	.75	.68	.72	.60	-.02	.13	.09	-.19
<i>SD</i>	.50	.49	.77	.37	.37	.36	.38	.39	.38	.53	.34	.29	.45
Range	0-1	0-1	-.73- 5.18	0-1	0-1	0-1	0-1	0-1	0-1	-.63- 5.93	0-1	0-1	-.85- 2.63

Table S5

Descriptives and Correlations among Main Study Variables – Non-Intervention Sample

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	-.05*	1											
3. Baseline aggression	.20***	.08***	1										
<i>Impulsivity</i>													
4. Grade 2	.18***	.16***	.26***	1									
5. Grade 4	.14***	.28***	.23***	.53***	1								
6. Grade 5	.11***	.28***	.19***	.48***	.61***	1							
7. Grade 7	.11***	.14***	.05	.20***	.28***	.34***	1						
8. Grade 8	.09**	.08*	.01	.16***	.25***	.34***	.49***	1					
9. Grade 10	.21***	-.10	.13*	-.03	.17*	.10	.36***	.20**	1				
<i>Outcomes</i>													
10. Aggression	.13***	.00	.27***	.11**	.10*	.02	.09*	-.01	.15*	1			
11. Substance use	.06**	-.23***	.03	.00	-.03	-.02	.08**	.06	.13*	.10**	1		
12. Suicidal ideation/attempts	.04	-.10***	.10***	.03	-.03	-.01	-.01	-.04	.06	.23***	.13***	1	
13. Anxiety/depression	.03	-.10***	.20***	.11***	.05	.02	-.05	.04	.28***	.38***	.12***	.35***	1
<i>Descriptives</i>													
<i>N</i>	2492	2312	2389	1891	1613	1881	1571	816	282	754	2203	1963	1643
<i>M</i>	.53	.59	.04	.75	.76	.75	.67	.71	.57	.01	.12	.09	-.19
<i>SD</i>	.50	.49	.81	.37	.36	.36	.38	.40	.40	.59	.33	.29	.45
Range	0-1	0-1	-.73- 5.18	0-1	0-1	0-1	0-1	0-1	0-1	-.50- 5.93	0-1	0-1	-.85- 2.63

Table S6

Descriptives and Correlations among Main Study Variables – Intervention Sample

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	-.01	1											
3. Baseline aggression	.22***	.11***	1										
<i>Impulsivity</i>													
4. Grade 2	.18***	.21***	.28***	1									
5. Grade 4	.19***	.38***	.27***	.59***	1								
6. Grade 5	.14***	.35***	.22***	.53***	.63***	1							
7. Grade 7	.14***	.21***	.13***	.20***	.30***	.36***	1						
8. Grade 8	.04	.12***	.09**	.17***	.28***	.32***	.48***	1					
9. Grade 10	.17***	.08	.12*	-.05	.00	.16**	.30***	.29***	1				
<i>Outcomes</i>													
10. Aggression	.12***	-.05	.17***	.11***	.08*	.08*	.09**	.09**	.07	1			
11. Substance use	.06*	-.16***	.01	-.04	-.01	-.01	.07**	.06	.13**	.04	1		
12. Suicidal ideation/attempts	-.01	-.09***	.06**	.06*	-.02	.00	-.02	-.03	.05	.22***	.17***	1	
13. Anxiety/depression	.02	-.10***	.17***	.10**	.02	.04	.03	.15***	.26***	.41***	.10***	.42***	1
<i>Descriptives</i>													
<i>N</i>	2483	2281	2416	2005	1517	1965	1664	1074	439	1013	2101	1907	1375
<i>M</i>	.54	.61	-.01	.73	.73	.74	.68	.73	.62	-.05	.14	.09	-.19
<i>SD</i>	.50	.49	.72	.37	.38	.36	.38	.38	.37	.48	.35	.29	.45
Range	0-1	0-1	-.73- 5.18	0-1	0-1	0-1	0-1	0-1	0-1	-.63- 5.45	0-1	0-1	-.85- 2.06

Table S7

Descriptives and Correlations among Main Study Variables – Prevention Intervention Research Center Generation 1

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	-.05*	1											
3. Baseline aggression	.19***	.14***	1										
<i>Impulsivity</i>													
4. Grade 2	.18***	-.03	.20***	1									
5. Grade 4	.15***	.13***	.19***	.35***	1								
6. Grade 5	.16***	.13***	.21***	.34***	.41***	1							
7. Grade 7	.22***	.13***	.21***	.29***	.29***	.34***	1						
8. Grade 8	-	-	-	-	-	-	-	-					
9. Grade 10	-	-	-	-	-	-	-	-	-				
<i>Outcomes</i>													
10. Aggression	-	-	-	-	-	-	-	-	-	-			
11. Substance use	.06**	-.29***	-.02	.00	-.06*	-.05*	.01	-	-	-	1		
12. Suicidal ideation/attempts	-.02	-.06**	.01	.01	-.02	.02	.06*	-	-	-	.16***	1	
13. Anxiety/depression	-.03	-.07**	.01	.03	.03	.00	-.01	-	-	-	.05*	.23***	1
<i>Descriptives</i>													
<i>N</i>	2311	2275	2145	1458	1320	1543	1355	0	0	0	2311	1990	1873
<i>M</i>	.50	.67	-.08	.78	.82	.81	.73	-	-	-	.10	.06	-.32
<i>SD</i>	.50	.47	.80	.37	.34	.35	.31	-	-	-	.30	.23	.33
Range	0-1	0-1	-.73- 5.18	0-1	0-1	0-1	0-1	-	-	-	0-1	0-1	-.50- 2.63

Table S8

Descriptives and Correlations among Main Study Variables – Prevention Intervention Research Center Generation 2

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	-.03	1											
3. Baseline aggression	.22***	-.01	1										
<i>Impulsivity</i>													
4. Grade 2	.22***	-.02	.30***	1									
5. Grade 4	-	-	-	-	1								
6. Grade 5	.15***	.09*	.18***	.32***	-	1							
7. Grade 7	.21***	.10*	.18***	.25***	-	.35***	1						
8. Grade 8	.10*	.06	.13**	.20***	-	.26***	.33***	1					
9. Grade 10	.20***	.07	.21***	.16**	-	.25***	.26***	.32***	1				
<i>Outcomes</i>													
10. Aggression	.15***	.06	.09*	.12**	-	.14**	.13**	.18***	.15**	1			
11. Substance use	.07	-.08*	.14***	.10*	-	.03	.13**	.09*	.05	.09*	1		
12. Suicidal ideation/attempts	-.04	-.02	.07	.06	-	.04	.09*	.03	.07	.10*	.19***	1	
13. Anxiety/depression	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Descriptives</i>													
<i>N</i>	678	677	678	560	0	530	552	547	401	644	678	641	0
<i>M</i>	.53	.86	-.17	.67	-	.85	.84	.82	.71	-.16	.28	.08	-
<i>SD</i>	.50	.34	.56	.33	-	.25	.25	.26	.30	.13	.45	.27	-
Range	0-1	0-1	-.69- 2.92	0-1	-	0-1	0-1	0-1	0-1	-.63- .97	0-1	0-1	-

Table S9

Descriptives and Correlations among Main Study Variables – Linking the Interest of Families and Teachers

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	-.03	1											
3. Baseline aggression	.18***	-.02	1										
<i>Impulsivity</i>													
4. Grade 2	.17***	-.03	.31***	1									
5. Grade 4	.17***	.03	.31***	.56***	1								
6. Grade 5	.09*	.00	.28***	.51***	.61***	1							
7. Grade 7	-.03	-.01	.13*	.22***	.22***	.22***	1						
8. Grade 8	-.04	.02	.17**	.14*	.22***	.24***	-	1					
9. Grade 10	-	-	-	-	-	-	-	-	1				
<i>Outcomes</i>													
10. Aggression	-	-	-	-	-	-	-	-	-	1			
11. Substance use	-	-	-	-	-	-	-	-	-	-	1		
12. Suicidal ideation/attempts	-	-	-	-	-	-	-	-	-	-	-	1	
13. Anxiety/depression	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Descriptives</i>													
<i>N</i>	671	575	671	576	544	528	292	246	0	0	0	0	0
<i>M</i>	.49	.02	-.21	.36	.33	.29	.54	.64	-	-	-	-	-
<i>SD</i>	.50	.14	.49	.41	.39	.39	.40	.41	-	-	-	-	-
Range	0-1	0-1	-.69- 2.63	0-1	0-1	0-1	0-1	0-1	-	-	-	-	-

Table S10

Descriptives and Correlations among Main Study Variables – SAFE Children

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	-.06	1											
3. Baseline aggression	.07	-.07	1										
<i>Impulsivity</i>													
4. Grade 2	.10*	-.04	.21***	1									
5. Grade 4	.10*	-.06	.23***	.27***	1								
6. Grade 5	.08	.07	.17***	.21***	.26***	1							
7. Grade 7	.26***	.04	.30***	.16**	.36***	.33***	1						
8. Grade 8	.11*	-.01	.22***	.22***	.36***	.30***	.56***	1					
9. Grade 10	.16**	-.04	.08	.12*	.08	.08	.16*	.21***	1				
<i>Outcomes</i>													
10. Aggression	.10	-.15	.19***	.10	.13*	.09	.21**	.20***	.18**	1			
11. Substance use	.13**	-.14*	.04	.00	.00	-.14**	-.03	-.03	.02	.11	1		
12. Suicidal ideation/attempts	.02	.07	-.03	.00	.01	.02	.04	.08	.02	.33***	.05	1	
13. Anxiety/depression	.02	-.06	.03	.03	.05	.08	.11	.11	.27***	.49***	.11	.38***	1
<i>Descriptives</i>													
<i>N</i>	424	198	424	422	416	407	290	352	320	319	424	424	319
<i>M</i>	.49	.91	-.15	.91	.87	.87	.63	.80	.46	-.09	.02	.04	-.22
<i>SD</i>	.50	.29	.50	.13	.19	.19	.34	.25	.42	.49	.15	.18	.38
Range	0-1	0-1	-.69- 1.94	.57 -1	0-1	0-1	0-1	0-1	0-1	-.50- 2.06	0-1	0-1	-.67- 1.97

Table S11

Descriptives and Correlations among Main Study Variables – Fast Track

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<i>Predictors</i>													
1. Sex (1=male)	1												
2. Race/ethnicity (1=Black)	.05	1											
3. Baseline aggression	.15***	.19***	1										
<i>Impulsivity</i>													
4. Grade 2	.12***	.16***	.21***	1									
5. Grade 4	.21***	.07*	.25***	.36***	1								
6. Grade 5	.15***	-.01	.22***	.36***	.47***	1							
7. Grade 7	.14***	-.02	.21***	.31***	.35***	.47***	1						
8. Grade 8	.14***	-.04	.16***	.24***	.30***	.39***	.47***	1					
9. Grade 10	-	-	-	-	-	-	-	-	-				
<i>Outcomes</i>													
10. Aggression	.09**	.10**	.12***	.07	.11**	.09**	.18***	.08*	-	1			
11. Substance use	-.00	-.23***	-.01	-.01	.07*	.03	.08*	.04	-	.15***	1		
12. Suicidal ideation/attempts	-.04	-.06	-.05	.03	-.02	-.01	.04	.01	-	.19***	.12***	1	
13. Anxiety/depression	-.15***	.02	.06	.12***	.08*	.11**	.17***	.15***	-	.35***	.16***	.39***	1
<i>Descriptives</i>													
<i>N</i>	891	868	887	880	850	838	746	745	0	804	891	815	826
<i>M</i>	.69	.52	.63	.87	.82	.79	.53	.64	-	.11	.15	.22	.11
<i>SD</i>	.46	.50	.79	.23	.26	.26	.50	.48	-	.69	.35	.42	.56
Range	0-1	0-1	-.73- 3.74	0-1	0-1	0-1	0-1	0-1	-	-.34- 5.93	0-1	0-1	-.85- 2.51

Table S12

Model Fit Statistics from the BCH Method – using Z-score Coding of Impulsivity Likert Scales

Classes	BIC	aBIC	AIC	Entropy	LMR-LRT	BLRT	N(%)
Combined							
1	41204.59	41175.99	41146.79	-	-	-	4549(100)
2	37678.72	37637.41	37595.22	.70	<.001	<.001	2661(58.5), 1888(41.5)
3	37060.83	37006.81	36951.65	.64	<.001	<.001	704(15.5), 1996(43.9), 1849(40.6)
4	36939.72	36872.99	36804.85	.64	.001	<.001	670(14.7), 1939(42.6), 187(4.1), 1753(38.5)
5	36736.50	36657.06	36575.94	.63	.001	<.001	804(17.7), 207(4.6), 399(8.8), 1637(40.0), 1502(33.0)
Non-Intervention							
1	20217.44	20188.85	20165.94	-	-	-	2259(100)
2	18575.61	18534.31	18501.22	.69	<.001	<.001	1328(58.8), 931(41.2)
3	18323.24	18269.23	18225.96	.62	<.001	<.001	864(39.6), 363(16.1), 1002(44.4)
4	18282.36	18215.64	18162.19	.63	.043	<.001	33(14.7), 870(38.5), 974(43.1), 83(3.7)
5	18164.25	18084.83	18021.19	.63	.045	<.001	421(18.6), 779(34.5), 95(4.2), 817(36.2), 147(6.5)
Intervention							
1	21029.41	21000.81	20977.78	-	-	-	2290(100)
2	19162.66	19121.35	19088.08	.71	<.001	<.001	1319(57.6), 971(42.4)
3	18820.17	18766.16	18722.66	.66	<.001	<.001	352(15.4), 955(41.7), 983(42.9)
4	18768.63	18701.91	18648.17	.66	.019	<.001	887(38.7), 964(42.1), 332(14.5), 107(4.7)
5	18689.80	18610.37	18546.40	.64	.529	<.001	291(12.7), 873(38.1), 115(5.0), 365(15.9), 646(28.2)

Note. BIC = Bayesian information criterion, aBIC = sample size adjusted Bayesian information criterion, AIC = Akaike information criterion,

LMR-LRT = Lo-Mendel-Rubin likelihood ratio test, BLRT = Bootstrapped likelihood ratio test.

Table S13

Model Fit Statistics from the BCH Method – using 0-2 Coding of Impulsivity Likert Scales

Classes	BIC	aBIC	AIC	Entropy	LMR-LRT	BLRT	N(%)
<i>Combined</i>							
1	31888.81	31860.21	31831.01	-	-	-	4549(100)
2	27583.16	27541.85	27499.66	.73	<.001	<.001	2545(55.9), 2004(44.1)
3	26778.33	26724.31	26669.15	.68	<.001	<.001	1671(36.7), 1817(39.9), 1061(23.3)
4	26600.01	26533.28	26465.13	.63	.005	<.001	1194(26.2), 1638(36.0), 633(13.9), 1084(23.8)
5	26470.03	26390.58	26309.46	.71	.005	<.001	1442(31.7), 905(19.9), 1354(29.8), 629(13.8), 219(4.8)
<i>Non-Intervention</i>							
1	15622.29	15593.70	15570.79	-	-	-	2259(100)
2	13630.28	13588.97	13555.88	.72	<.001	<.001	1305(57.8), 954(42.2)
3	13268.71	13214.70	13171.43	.67	<.001	<.001	497(22.0), 862(38.2), 900(39.8)
4	13196.44	13129.72	13076.26	.64	.012	<.001	716(31.7), 806(35.7), 203(9.0), 534(23.6)
5	13135.85	13056.43	12992.79	.71	.045	<.001	431(19.1), 101(4.5), 693(30.7), 313(13.9), 721(31.9)
<i>Intervention</i>							
1	16293.31	16264.72	16241.68	-	-	-	2290(100)
2	14007.76	13966.45	13933.19	.75	<.001	<.001	1233(53.8), 1057(46.2)
3	13584.08	13530.07	13486.57	.69	<.001	<.001	806(35.2), 553(24.1), 931(40.7)
4	13485.76	13419.04	13365.30	.65	.024	<.001	589(25.7), 323(14.1), 566(24.7), 812(35.5)
5	13435.03	13355.60	13291.62	.61	.050	<.001	352(15.4), 539(23.5), 520(22.7), 327(14.3), 552(24.1)

Note. BIC = Bayesian information criterion, aBIC = sample size adjusted Bayesian information criterion, AIC = Akaike information criterion,

LMR-LRT = Lo-Mendel-Rubin likelihood ratio test, BLRT = Bootstrapped likelihood ratio test.