

Table S1. Previous research on sustained attention and math performance in children.

Groups		Measure Cognitive Attention	Measure Math Achievement	Relation Attention to Math Performance
Lindsay et al., 2001 (n = 83; grade 5 - 8)	Dyscalculia (n = 27) vs. Control (n = 56)	Conners' Continuous Performance Test (CBT: approx. 14 minutes): <u>Scales:</u> omission errors; commission errors; mean response time (RT); SE of RT; mean response time	Different Assessments conducted by schools: Iowa Test of Basic Skills; Stanford Achievement Test; Missouri Mastery Test	Dyscalculia group had more omission errors and were more inconsistent on SE of RT (no gender effects) SE-RT and percent commission errors were predictors of math performance
		Laptop assessment		
Huckeba et al., 2008 (n = 64; 8 - 16 years old)	Children with Tourette Syndrome (TS) (n = 47) vs. Control (n = 17)	Test of Variables of Attention (TOVA: approx. 21 minutes): <u>Scales:</u> commission errors; omission errors; RT	Standardized arithmetic test Two experimental calculation tasks	IQ and TOVA scores were predictors of math performance (TS group) Group of TS with highest attentional deficits had lowest math performance on standardized and experimental tasks
		Laptop assessment		
Steele et al., 2012 (n = 83; 3 - 6 years old)	-	CBT (approx. 4 minutes):	"give-a-number" (Wynn, 1990)	Selective-sustained attention was associated with basic numeracy and a predictor of basic numeracy (12 months after the attention assessment/longitudinal outcome)
		Laptop assessment	Test of Early Mathematics Ability III (TEMA-III)	Executive attention was associated with cardinality understanding and a predictor of cardinality, nonverbal addition/subtraction (at the time of attention assessment)
Anobile et al., 2013 (n = 68; 8 - 11 years old)	-	Visual sustained attention test (30 trials of multiple object tracking) <u>Scales:</u> altering; Orienting; conflicting	Standardized Italian Battery (Biancardi & Nicoletti, 2004)	Attentional Performance was associated with math performance ($r = .40$), even significant after controlling for age, intelligence, gender, reading performance
		Computer assessment		

Szűcs et al., 2014 (n = 98; grade 3 -4)	-	<p>Attend to stimuli stream of letters and to detect a target sequence (80 trials of 3 types)</p> <p><u>Scales</u>: number of hits; misses of targets; RT for target hits; correct rejections; false alarms for deceiver and non- target trials</p> <p>Computer assessment</p>	<p>Mathematics Assessment for Learning and Teaching test</p> <p>WIAT-II (numerical operations subtest)</p>	<p>Sustained attention had no strong relation to math performance ($r = .21$)</p> <p>Sustained attention was no predictor of math achievement, but of number sense variables. Number sense was no predictor of math achievement.</p>
Richard et al., 2018 (n = 24; 8 - 18 years old)	Survivors of lymphoblastic leukemia (n = 24)	<p>IVA measure of sustained attention and response control</p> <p><u>Scales</u>: omission errors; RT of correct responses; SE of RT correct responses; commission errors; RT of all responses; stamina</p> <p>Computer assessment</p>	WJ Calculation	<p>Visual response control and visual attention explained 26% of the variance (math performance) after controlling for IQ</p>

Table S2. Bivariate correlations between anxiety, attention variables and subscales of the mathematical test.

Bivariate Correlations						
Variables	Addition	Subtraction	Multi-plication	Division	Missing Term	Comparison
State Anxiety Prior Math Test	-.28**	-.28**	-.19**	-.22**	-.23**	-.19**
State Anxiety Post Math Test	-.14**	-.15**	-.11**	-.16**	-.15**	-.09
State Anxiety Prior Attention Test	-.17**	-.22**	-.16**	-.22**	-.22**	-.14**
State Anxiety Post Attention Test	-.12*	-.14**	-.09	-.15**	-.11*	-.08
General Anxiety	-.28**	-.28**	-.25**	-.24**	-.28**	-.20**
Self-Rating ADHD	-.26**	-.27**	-.30**	-.32**	-.30**	-.17**
Sustained Attention	.36**	.38**	.45**	.40**	.45**	.46**

Note. * $p \leq .05$ (2-tailed) ** $p \leq .01$ (2-tailed)

Table S3. Math subtests scores in each LPA profile.

Variable	M (SD)						ANOVA			
	Profile 1 n = 30 (7.4%)	Profile 2 n = 37 (9.2%)	Profile 3 n = 84 (20.8%)	Profile 4 n = 57 (14.1%)	Profile 5 n = 60 (14.9%)	Profile 6 n = 135 (33.5%)	Overall n = 403	<i>F</i> (5, 397)	<i>p</i>	η^2
Addition	23.10 (3.9)	24.57 (3.9)	26.84 (5.4)	26.09 (4.6)	27.62 (4.6)	28.20 (5.3)	26.82 (5.1)	7.64	<.001	.088
Subtraction	21.33 (4.9)	23.05 (5.3)	25.70 (6.1)	24.90 (4.5)	26.80 (5.5)	27.44 (5.9)	25.76 (5.8)	8.64	<.001	.098
Multiplication	18.20 (5.6)	21.27 (5.7)	23.76 (6.5)	22.39 (5.7)	23.50 (5.9)	25.00 (6.6)	23.30 (6.4)	7.27	<.001	.084
Division	15.70 (8.6)	16.81 (8.4)	21.79 (8.3)	20.63 (7.7)	22.30 (7.6)	23.71 (8.4)	21.43 (8.5)	7.67	<.001	.088
Missing Term	9.60 (5.5)	11.49 (4.6)	14.78 (5.7)	12.84 (5.5)	15.12 (5.8)	16.03 (5.8)	14.29 (5.9)	9.72	<.001	.109
Comparision	24.20 (5.9)	24.87 (6.2)	27.56 (7.9)	26.81 (5.6)	28.27 (5.6)	28.87 (7.5)	27.50 (7.2)	3.56	=.004	.043