



**Supplementary Material**

**Article Title:** Mental Health and Extracurricular Education in Korean First Graders: A School-Based Cross-Sectional Study

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eTable 1. Multiple regression analyses associating scores on the BASC-2 hyperactivity subscale with tutoring and putative protective factors

Variables	Unadjusted			Adjusted for family time			Adjusted for play time and family time			Adjusted for play time, family time, and time asleep		
	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p
	0.029			0.027			0.026			0.027		
Sex												
Female		-0.109	0.009		-0.109	0.010		-0.108	0.010		-0.111	0.009
Family structure												
<sup>a</sup> Single or other		-0.085	0.045		-0.085	0.045		-0.085	0.046		-0.088	0.039
Educational level of parents												
<sup>b</sup> One parent		-0.019	0.655		-0.019	0.658		-0.021	0.632		-0.022	0.611
<sup>c</sup> Neither		-0.046	0.299		-0.046	0.301		-0.048	0.279		-0.052	0.237
Job status of father												
<sup>d</sup> Temporary or unemployed		0.021	0.631		0.020	0.636		0.019	0.650		0.019	0.656
Dual income		-0.105	0.013		-0.104	0.014		-0.114	0.015		-0.120	0.011
Time in tutoring		0.089	0.035		0.090	0.035		0.087	0.042		0.083	0.056
Play time					0.008	0.845		0.009	0.835		0.007	0.871
Family time								-0.024	0.613		-0.029	0.544
Time asleep											-0.054	0.201

<sup>a</sup>Single or other; living with single parents and others <sup>b</sup>One parent; one parent college-educated <sup>c</sup>Neither; neither parent college-educated <sup>d</sup>Temporary or no; temporary or no job, Time in tutoring; time spent in extracurricular education per day (minutes), Play time: time spent with friend per day(minutes); Family time: time spent with parents per day (minutes), Time asleep per day(minutes)

eTable 2. Multiple regression analyses associating scores on the BASC-2 aggression subscale with tutoring and putative protective factors

Variables	Unadjusted			Adjusted for family time			Adjusted for play time and family time			Adjusted for play time, family time, and time asleep		
	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p
	0.013			0.012			0.011			0.009		
Sex												
Female		-0.081	0.055		-0.079	0.061		-0.079	0.063		-0.080	0.063
Family structure												
<sup>a</sup> Single or other		-0.039	0.358		-0.039	0.354		-0.039	0.360		-0.040	0.350
Educational level of parents												
<sup>b</sup> One parent		-0.065	0.136		-0.086	0.053		-0.067	0.127		-0.040	0.350
<sup>c</sup> Neither		-0.086	0.052		-0.086	0.053		-0.089	0.046		-0.090	0.044
Job status of father												
<sup>d</sup> Temporary or unemployed		0.009	0.843		0.008	0.856		0.007	0.875		0.007	0.877
Dual income		-0.061	0.150		-0.059	0.168		-0.072	0.126		-0.074	0.120
Time in tutoring		0.070	0.100		0.073	0.089		0.069	0.109		0.068	0.118
Play time					0.022	0.613		0.022	0.602		0.022	0.611
Family time								-0.032	0.507		-0.033	0.490
Time asleep											-0.017	0.693

<sup>a</sup>Single or other; living with single parents and others <sup>b</sup>One parent; one parent college-educated <sup>c</sup>Neither; neither parent college-educated <sup>d</sup>Temporary or no; temporary or no job, Time in tutoring; time spent in extracurricular education per day (minutes), Play time: time spent with friend per day(minutes); Family time: time spent with parents per day (minutes), Time asleep per day(minutes)

eTable 3. Multiple regression analyses associating scores on the BASC-2 conduct problem subscale with tutoring and putative protective factors

Variables	Unadjusted			Adjusted for family time			Adjusted for play time and family time			Adjusted for play time, family time, and time asleep		
	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p
	0.016			0.027			0.027			0.034		
Sex												
Female		-0.115	0.007		-0.106	0.012		-0.105	0.013		-0.110	0.009
Family structure												
<sup>a</sup> Single or other		-0.052	0.218		-0.055	0.196		-0.054	0.203		-0.059	0.162
Educational level of parents												
<sup>b</sup> One parent		0.038	0.380		0.040	0.349		0.037	0.390		0.035	0.419
<sup>c</sup> Neither		0.061	0.171		0.062	0.157		0.069	0.194		0.050	0.262
Job status of father												
<sup>d</sup> Temporary or unemployed		-0.030	0.491		-0.033	0.437		-0.035	0.416		-0.036	0.405
Dual income		-0.037	0.379		-0.025	0.552		-0.045	0.334		-0.056	0.237
Time in tutoring		0.086	0.053		0.102	0.017		0.097	0.024		0.089	0.038
Play time					0.114	0.008		0.115	0.007		0.111	0.009
Family time								-0.047	0.322		-0.055	0.243
Time asleep											-0.093	0.028

<sup>a</sup>Single or other; living with single parents and others <sup>b</sup>One parent; one parent college-educated <sup>c</sup>Neither; neither parent college-educated <sup>d</sup>Temporary or no; temporary or no job, Time in tutoring; time spent in extracurricular education per day (minutes), Play time: time spent with friend per day(minutes); Family time: time spent with parents per day (minutes), Time asleep per day(minutes)

eTable 4. Multiple regression analyses associating scores on the BASC-2 depression subscale with tutoring and putative protective factors

Variables	Unadjusted			Adjusted for family time			Adjusted for play time and family time			Adjusted for play time, family time, and time asleep		
	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p	R <sup>2</sup>	beta	p
	0.026			0.025			0.023			0.022		
Sex												
Female		0.094	0.025		0.093	0.027		0.093	0.027		0.092	0.029
Family structure												
<sup>a</sup> Single or other		-0.070	0.099		-0.069	0.101		-0.069	0.101		-0.070	0.098
Educational level of parents												
<sup>b</sup> One parent		-0.004	0.922		-0.005	0.915		-0.006	0.893		-0.006	0.887
<sup>c</sup> Neither		0.008	0.864		0.007	0.869		0.006	0.901		0.004	0.923
Job status of father												
<sup>d</sup> Temporary or unemployed		0.027	0.521		0.028	0.513		0.027	0.522		0.027	0.524
Dual income		-0.053	0.206		-0.063	0.183		-0.063	0.183		-0.064	0.524
Time in tutoring		0.149	0.000		0.147	0.001		0.145	0.001		0.144	0.001
Play time					-0.018	0.673		-0.018	0.710		-0.018	0.671
Family time								-0.018	0.710		-0.019	0.690
Time asleep											-0.015	0.729

<sup>a</sup>Single or other; living with single parents and others <sup>b</sup>One parent; one parent college-educated <sup>c</sup>Neither; neither parent college-educated <sup>d</sup>Temporary or no; temporary or no job, Time in tutoring; time spent in extracurricular education per day (minutes), Play time: time spent with friend per day(minutes); Family time: time spent with parents per day (minutes), Time asleep per day(minutes)