Journal of Health

and Social Behavior

School Context in Adolescence and Cognitive Functioning 50 Years Later

Sara M. Moorman
Boston College

Emily A. Greenfield
Rutgers, The State University of New Jersey

Sarah Garcia
University of Minnesota

Table OSM-1. *Main Manuscript Table 3, Unabridged*

	Memory				Language/Executive Function			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	B (SE)	*B (SE)*	*B (SE)*	*B (SE)*	*B (SE)*	*B (SE)*	*B (SE)*	*B (SE)*
Secondary School Context								
School advantage (effect on baseline)	-0.03 (0.35)	-0.13 (0.35)	-0.15 (0.34)	-0.15 (0.34)	0.67** (0.27)	0.51 (0.26)	0.46 (0.25)	0.46 (0.25)
School advantage (effect on change)	0.77 (0.40)	0.84 (0.40)	0.85* (0.40)	0.85* (0.39)	-0.01 (0.26)	0.01 (0.26)	0.03 (0.26)	0.03 (0.26)
Socioeconomic Status								
Parental (baseline)		0.92** (0.29)	0.50 (0.29)	0.50 (0.29)		1.33*** (0.22)	0.78*** (0.22)	0.78*** (0.22)
Parental (change)		-0.69* (0.34)	-0.41 (0.34)	-0.41 (0.34)		-0.09 (0.22)	-0.12 (0.22)	-0.12 (0.22)
Midlife (baseline)			2.41*** (0.31)	2.41*** (0.31)			2.93*** (0.23)	2.93*** (0.23)
Midlife (change)			-1.63*** (0.37)	-1.62*** (0.37)			0.15 (0.24)	0.15 (0.24)
Interaction Terms								
Secondary school advantage x class rank (baseline)				-0.02 (0.21)				-0.48** (0.16)

Table OSM-1 *cont'd*	Memory				Language/Executive Function			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	B (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Secondary school advantage x class rank (change)				-0.05 (0.25)				0.27 (0.16)
Covariates								
Class rank (baseline)	2.54*** (0.32)	2.41*** (0.32)	1.59*** (0.35)	1.61*** (0.40)	4.04*** (0.22)	3.81*** (0.22)	2.65*** (0.24)	3.10*** (0.28)
Class rank (change)	-0.31 (0.37)	-0.22 (0.37)	0.31 (0.39)	0.35 (0.45)	-0.13 (0.24)	-0.11 (0.24)	-0.18 (0.26)	-0.44 (0.30)
Polygenic score for cognitive ability (baseline)	0.26 (0.27)	0.25 (0.27)	0.15 (0.27)	0.15 (0.27)	1.41*** (0.21)	1.40*** (0.21)	1.21*** (0.20)	1.21*** (0.20)
Polygenic score for cognitive ability (change)	0.74* (0.32)	0.75* (0.32)	0.83* (0.32)	0.83* (0.32)	-0.19 (0.21)	-0.18 (0.21)	-0.17 (0.21)	-0.18 (0.21)
Language (baseline)	0.17*** (0.02)	0.16*** (0.02)	0.12*** (0.02)	0.12*** (0.02)				
Language (change)	0.11*** (0.03)	0.12*** (0.03)	0.16*** (0.03)	0.16*** (0.03)				
Memory (baseline)					0.07*** (0.01)	0.06*** (0.01)	0.05*** (0.01)	0.05*** (0.01)
Memory (change)					0.10*** (0.02)	0.10*** (0.02)	0.10*** (0.02)	0.10*** (0.02)
Gender (baseline)	6.69*** (0.53)	6.77*** (0.53)	8.00*** (0.56)	8.00*** (0.56)	-0.19 (0.42)	-0.06 (0.42)	1.50*** (0.43)	1.48** (0.43)
Gender (change)	-3.17*** (0.64)	-3.23*** (0.64)	-4.06*** (0.67)	-4.06*** (0.67)	-0.70 (0.43)	-0.72 (0.43)	-0.66 (0.45)	-0.65 (0.45)
Adolescent geographic setting (baseline)	-1.09 (0.87)	-0.87 (0.88)	-0.59 (0.86)	-0.58 (0.86)	-0.64 (0.68)	-0.35 (0.66)	-0.10 (0.62)	-0.01 (0.63)

Table OSM-1 *cont'd*	Memory				Language/Executive Function			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	B (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Adolescent geographic setting (change)	0.94 (0.99)	0.78 (0.99)	0.60 (1.00)	0.60 (0.99)	0.17 (0.65)	0.15 (0.66)	0.24 (0.65)	0.24 (0.66)
Adolescent family structure (baseline)	-1.71 (0.89)	-1.46 (0.89)	-1.54 (0.88)	-1.55 (0.89)	-0.01 (0.69)	0.35 (0.69)	0.22 (0.67)	0.25 (0.67)
Adolescent family structure (change)	1.52 (1.07)	1.33 (1.07)	1.39 (1.07)	1.39 (1.07)	-0.13 (0.70)	-0.15 (0.71)	-0.13 (0.71)	-0.15 (0.71)
Number of siblings (baseline)	-0.11 (0.12)	-0.04 (0.12)	0.03 (0.12)	0.03 (0.12)	-0.17 (0.09)	-0.06 (0.09)	0.02 (0.09)	0.03 (0.09)
Number of siblings (change)	0.09 (0.14)	0.04 (0.14)	-0.00 (0.14)	-0.00 (0.14)	-0.02 (0.09)	-0.03 (0.10)	-0.03 (0.10)	-0.03 (0.10)
Age (65/72)	-10.0*** (1.70)	-10.1*** (1.70)	-11.03*** (1.70)	-11.02*** (1.70)	-6.31*** (1.05)	-6.35*** (1.05)	-6.56*** (1.04)	-6.57*** (1.04)
Random Components								
School-level intercept	1.11 (0.62)	1.17 (0.59)	0.98 (0.67)	0.97 (0.67)	0.85 (0.48)	0.51 (0.63)	0.00 (0.00)	0.00 (0.00)
Person-level intercept	7.80 (0.26)	7.79 (0.26)	7.76 (0.26)	7.76 (0.26)	7.71 (0.17)	7.66 (0.17)	7.27 (0.16)	7.26 (0.16)
Observation-level intercept	11.51 (0.16)	11.50 (0.16)	11.45 (0.16)	11.45 (0.16)	7.54 (0.10)	7.54 (0.10)	7.53 (0.10)	7.52 (0.10)
Deviance; *df*	46,504; 22	46,494; 24	46,432; 26	46,432; 28	43,007; 22	42,964; 24	42,745; 26	42,736; 28

Note. All models adjust for five principal components of population stratification by ancestry. All predictors are standardized. Memory and language/executive function are presented as percentage of maximum possible. *** $p < .001$, ** $p < .01$, * $p < .05$

Table OSM-2. *Comparison of Members of the Analytic Sample against Members of Excluded Subgroups*

	Analytic sample	Private school students	Attrited before age 65	Refused genetic testing	Incomplete cognitive testing
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Adult Cognition					
Memory (age 65)	0.54 (0.17)	0.57 (0.17)	NA	0.54 (0.18)	NA
Memory (age 72)	0.48 (0.13)	0.50 (0.14)	NA	0.48 (0.14)	NA
Language/executive function (age 65)	0.47 (0.12)	0.49 (0.14)	NA	0.45 (0.15)	NA
Language/executive function (age 72)	0.44 (0.12)	0.45 (0.12)	NA	0.43 (0.14)	NA
Secondary School Context					
School advantage (standardized across schools)	0.94 (1.24)	NA	1.00 (1.23)	0.95 (1.22)	0.95 (1.23)
Academic Achievement and Cognitive Ability					
High school rank (percentile)	54.62 (28.14)	49.43 (29.15)	43.57 (28.51)	49.61 (28.68)	53.84 (28.34)
Polygenic score for cognitive ability	-0.34 (0.22)	-0.32 (0.23)	NA	NA	-0.35 (0.22)
Socioeconomic Status					
Mother's education (years)	10.65 (2.96)	10.76 (2.98)	10.46 (2.82)	10.58 (2.90)	10.78 (2.94)
Father's education (years)	10.30 (3.08)	10.75 (3.30)	10.08 (3.01)	10.16 (3.14)	10.33 (3.20)
Father's 1950 Duncan SEI	29.56 (22.05)	35.11 (23.50)	28.40 (20.78)	30.10 (21.49)	30.18 (22.67)
Family income[a] (dollars)	5,400 (300-99,800)	6,100 (0-99,800)	5,100 (100-74,600)	6,173 (100-99,800)	5,300 (200-99,800)
Own education (years)	13.74 (2.34)	13.93 (2.41)	13.12 (1.98)	13.34 (2.12)	13.64 (2.24)
Percentage of workers in own field with a BA	49.2 (22.7)	50.6 (22.4)	43.7 (23.0)	46.5 (22.7)	48.3 (22.8)

Table OSM-2 *cont'd*	Analytic sample	Private school students	Attrited before age 65	Refused genetic testing	Incomplete cognitive testing
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Own income at age 53[a] (dollars)	56,650 -14,400 5,939,814	53,300 -12,000 1,029,120	39,050 -7,100 8,500,000	47,000 -13,000 6,007,000	53,200 0-9,999,999
Covariates					
Female (percentage)	52.06	53.24	46.14	55.29	52.55
Rural residence in adolescence (percentage)	55.64	34.30	53.30	54.31	55.53
Number of siblings	2.98 (2.23)	3.02 (2.31)	2.97 (2.28)	2.92 (2.31)	2.96 (2.32)
Did not live with both parents most of the time until 1957 (percentage)	9.17	9.59	11.72	10.69	9.96
N [b]	3,012	1,790	2,334	1,948	1,233

Note. All values reported on their original metrics (i.e., prior to the creation of indices, skew correction, or standardizing).

[a] Median and range reported due to skew. A negative value indicates debt.

[b] Sample size varies for specific measures. For example, adult SES measures in the "attrited before age 65" group pertain only to participants who were still participating at age 53.