

Mechanisms and Impacts from Gender Peer Effects at School
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Web Appendix

Table A1. Standard Deviation in the Proportion Female by Grade

Grade (1)	Raw (2)	Within School (3)
5	0.078	0.065
6	0.079	0.065
7	0.066	0.058
8	0.066	0.060
9	0.056	0.050
10	0.130	0.055

Notes: The table reports the standard deviation of the proportion female by grade and the extent that is left after removing school fixed effects.

Table A2. Heterogeneous Effects of the Proportion Female on High School Outcomes by School Size

Outcome	Females			Males		
	Full sample	Average enrollment <200	Average enrollment ≥200	Full sample	Average enrollment <200	Average enrollment ≥200
	(1)	(2)	(3)	(4)	(5)	(6)
Average score	6.314 (2.142) <i>69.18</i>	5.062 (3.050) <i>66.63</i>	6.601 (2.957) <i>70.17</i>	7.918 (2.702) <i>63.10</i>	11.943 (3.992) <i>60.25</i>	4.570 (3.607) <i>64.22</i>
Matriculation status	0.099 (0.041) <i>0.619</i>	0.070 (0.060) <i>0.561</i>	0.111 (0.056) <i>0.642</i>	0.049 (0.045) <i>0.523</i>	0.025 (0.061) <i>0.461</i>	0.080 (0.065) <i>0.547</i>
Number of credit units	1.455 (0.855) <i>20.61</i>	1.680 (1.108) <i>19.58</i>	1.033 (1.231) <i>21.01</i>	1.389 (1.050) <i>19.18</i>	1.817 (1.401) <i>17.88</i>	1.228 (1.492) <i>19.69</i>
Number of advanced level subjects in science	0.141 (0.072) <i>0.581</i>	0.042 (0.081) <i>0.444</i>	0.221 (0.113) <i>0.634</i>	0.227 (0.076) <i>0.619</i>	0.202 (0.083) <i>0.476</i>	0.248 (0.118) <i>0.675</i>
Matriculation diploma that meets university requirements	0.086 (0.047) <i>0.559</i>	0.063 (0.062) <i>0.490</i>	0.094 (0.069) <i>0.586</i>	0.084 (0.046) <i>0.473</i>	0.052 (0.058) <i>0.403</i>	0.123 (0.069) <i>0.500</i>
Average SD(prop. female)	0.050	0.061	0.039	0.050	0.061	0.039
Number of schools	264	136	128	264	136	128
Number of students	205,891	57,822	148,069	199,038	56,146	142,892

Notes: The table reports heterogeneous by school size of effects of the proportion of female students on matriculation outcomes. The table also reproduces the estimates from the full sample reported in columns 1 and 3 of Table 3. The regressions control for students background characteristics and school time varying controls detailed in Table 3. The regressions include also school and year fixed effects and school specific linear time trends and control for a quadratic function of enrollment. Robust standard errors clustered at the school level are reported in parenthesis. Outcome means are reported in *Italics*.

Table A3. Quintiles of the Proportion Female in High Schools

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
A. Summary Statistics					
Range	0.000-0.446	0.446-0.503	0.503-0.541	0.541-0.587	0.587-1.000
Mean	0.309	0.479	0.522	0.561	0.652
Median	0.345	0.481	0.522	0.560	0.631
Number of students	64,994	84,770	95,525	87,610	72,030
B. School Transitions Across Quintiles					
Quintile 1	24	70	56	36	22
Quintile 2		1	124	103	58
Quintile 3			1	126	71
Quintile 4				0	93
Quintile 5					8

Note: Panel A reports the range, median, and number of students for each quintile. The quintiles are defined based on the distribution of proportion female across schools in all years. The matrix in panel B shows the transition of schools across quintiles. The elements of the diagonal report the number of schools that appear in the same quintile during the whole period of interest. The elements of the off-diagonals report the number of schools that are observed both in quintile x and in quintile y. The sum of observations across cells in panel B is larger than the total number of schools in the sample since schools can be observed in multiple quintiles.

Table A4. Nonlinear Estimates of the Effect of Proportion Female on Matriculation Outcomes

Quintile	Females				Males			
	II	III	IV	V	II	III	IV	V
Range	0.446-0.503	0.503-0.541	0.541-0.587	0.587-1.000	0.446-0.503	0.503-0.541	0.541-0.587	0.587-1.000
Mean	0.479	0.522	0.561	0.652	0.479	0.522	0.561	0.652
Median	0.481	0.522	0.560	0.631	0.481	0.522	0.560	0.631
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Average Score	0.667 (0.567)	0.709 (0.616)	0.861 (0.613)	1.608 (0.676)	1.143 (0.509)	0.643 (0.537)	1.341 (0.567)	1.954 (0.698)
Matriculation status	0.007 (0.010)	0.003 (0.010)	0.006 (0.010)	0.026 (0.012)	0.007 (0.008)	0.001 (0.008)	0.005 (0.009)	0.013 (0.012)
Number of credit units	0.310 (0.218)	0.392 (0.226)	0.348 (0.228)	0.576 (0.254)	0.350 (0.210)	0.241 (0.213)	0.348 (0.220)	0.593 (0.284)
Number of advanced level subjects in science	0.006 (0.017)	0.023 (0.018)	0.024 (0.018)	0.042 (0.020)	0.032 (0.015)	0.040 (0.015)	0.045 (0.015)	0.058 (0.021)
Matriculation diploma that meets university requirements	0.003 (0.010)	0.003 (0.010)	0.004 (0.011)	0.024 (0.012)	0.011 (0.009)	0.008 (0.009)	0.013 (0.009)	0.021 (0.012)

Notes: The table reports non-linear effects of the proportion of female students on matriculation outcomes. The model replaces the single treatment variable with a set of quintile indicators for the proportion of female students. The omitted category is quintile I. The mean proportion female in quintile I is 0.309 and the median is 0.345. Descriptive statistics on the quintiles are reported in table A3. The regressions control for students background characteristics and school time varying controls detailed in Table 3. The regressions include also school and year fixed effects and school specific linear time trends and control for a quadratic function of enrollment. Robust standard errors clustered at the school level are reported in parenthesis.

Table A5. Within School Associations Between Students Test Scores in Math and the Classroom Environment

	5 th Grade		8 th Grade	
	Females (1)	Males (2)	Females (3)	Males (4)
<i>Classroom disruption and violence</i>				
1 Frequently the classroom is noisy and not conducive to learning	-0.120 (0.017)	-0.132 (0.016)	-0.173 (0.027)	-0.179 (0.026)
2 There are many fights among students in my classroom	-0.087 (0.012)	-0.111 (0.012)	-0.096 (0.017)	-0.109 (0.017)
3 Sometimes I'm scared to go to school because there are violent students	-0.117 (0.020)	-0.132 (0.020)	-0.151 (0.029)	-0.167 (0.032)
<i>Inter-student relationships</i>				
4 I feel well adjusted socially in my class	0.133 (0.024)	0.130 (0.023)	0.062 (0.026)	0.055 (0.028)
5 Students in my class help each other	0.105 (0.016)	0.090 (0.017)	0.106 (0.018)	0.102 (0.019)
<i>Teachers-students relationships</i>				
6 Students frequently talk back to teachers	-0.095 (0.012)	-0.113 (0.012)	-0.227 (0.023)	-0.251 (0.024)
7 There are good relationships between teachers and students	0.101 (0.017)	0.098 (0.016)	0.094 (0.018)	0.099 (0.020)
8 There is mutual respect between teachers and students	0.100 (0.018)	0.098 (0.017)	0.100 (0.018)	0.089 (0.022)

Notes: The table reports within school associations between each of the mechanisms (averaged at the class level) and students test scores in math. All regressions control for student background characteristics, cohort mean characteristics, a quadratic function of enrollment, year dummies, and school fixed effects. Robust standard errors clustered at the school level are reported in parenthesis.

Table A6. Falsification Tests for the Proportion Female on the Classroom Environment

	Secular and religious elementary schools (5 th and 6 th grades)		Secular middle schools (7 th through 9 th grades)		Full sample (5 th through 9 th)	
	Females	Males	Females	Males	Females	Males
	(1)	(2)	(3)	(4)	(5)	(6)
Classroom disruption and violence						
1 Frequently the classroom is noisy and not conducive to learning	0.061 (0.112)	0.094 (0.097)	0.000 (0.141)	0.064 (0.132)	0.038 (0.088)	0.098 (0.078)
2 There are many fights among students in my classroom	0.430 (0.139)	0.217 (0.140)	-0.139 (0.193)	-0.026 (0.184)	0.194 (0.115)	0.136 (0.111)
3 Sometimes I'm scared to go to school because there are violent students	0.118 (0.095)	-0.055 (0.089)	0.029 (0.102)	0.186 (0.115)	0.088 (0.071)	0.030 (0.069)
Average effect	0.146 (0.069)	0.060 (0.059)	-0.025 (0.095)	0.059 (0.080)	0.082 (0.057)	0.064 (0.048)
Inter-student relationships						
4 I feel well adjusted socially in my class	-0.100 (0.084)	0.101 (0.076)	-0.101 (0.110)	-0.187 (0.105)	-0.080 (0.066)	-0.004 (0.061)
5 Students in my class help each other	-0.271 (0.102)	-0.054 (0.101)	-0.065 (0.153)	-0.063 (0.149)	-0.172 (0.086)	-0.064 (0.084)
Average effect	-0.155 (0.068)	0.020 (0.060)	-0.069 (0.098)	-0.098 (0.084)	-0.103 (0.056)	-0.025 (0.049)
Teacher-student relationships						
6 Students frequently talk back to teachers	0.118 (0.141)	0.058 (0.130)	-0.097 (0.167)	-0.057 (0.156)	0.040 (0.107)	0.039 (0.101)
7 There are good relationships between teachers and students	-0.105 (0.107)	0.016 (0.108)	0.304 (0.153)	0.092 (0.159)	0.046 (0.087)	0.041 (0.091)
8 There is mutual respect between teachers and students	-0.121 (0.101)	0.014 (0.108)	0.215 (0.155)	0.072 (0.160)	0.013 (0.086)	0.037 (0.091)
Average effect (sign of item 6 is reversed)	-0.092 (0.081)	-0.005 (0.073)	0.168 (0.112)	0.054 (0.098)	0.007 (0.066)	0.010 (0.059)
Number of students	105,376	107,573	131,389	130,539	236,765	238,112
Number of schools	1,008	1,008	384	384	1,301	1,301

Notes: The table reports falsification tests for the outcomes reported in Table 6. With the exception of 7th grade, the proportion of female students in grade g was replaced with the proportion of female students in grade g-1. The proportion of female students in 7th grade was replaced with the proportion of female students in 9th grade. Regression estimates are from models that include the control variables specified in Table 6. Robust standard errors clustered at the school level are reported in parenthesis.

Table A7. Students Fixed Effects Estimates of the Effect of Proportion Female on Student's Behavior

	Females (1)	Males (2)
Self-discipline		
1 I understand well my teacher's scholastic requirements	0.143 (0.150)	-0.045 (0.165)
2 I know what behavior is allowed or forbidden in school	-0.064 (0.102)	0.034 (0.136)
3 This year I was involved in many fights	0.026 (0.143)	0.192 (0.234)
4 Sometimes the teachers treat me badly	0.155 (0.265)	0.269 (0.254)
5 When I have a problem at school there is always someone I can turn to (from the teaching staff)	-0.118 (0.230)	0.230 (0.234)
Average effect (signs of items 3,4 are reversed)	-0.030 (0.081)	-0.026 (0.075)
Study Efforts		
6 Weekly hours spent on homework in Math	0.007 (0.241)	-0.117 (0.231)
7 Weekly hours spent on homework in Hebrew	0.058 (0.218)	-0.066 (0.232)
8 Weekly hours spent on homework in English	-0.106 (0.249)	-0.004 (0.255)
9 Weekly hours spent on homework in Science and Technology	0.405 (0.229)	-0.111 (0.261)
Average effect	0.058 (0.102)	-0.042 (0.098)
Number of students	43,584	42,785
Number of elementary schools	982	980

Notes: The table reports estimates of the effect of the change in the proportion female (in the transition from elementary school to middle school) on the change in students assessment of own behavior. The sample includes 5th and 6th grade students in 2002 and 2003 and their follow up to middle school in 2004 and 2005. The boys sample is slightly smaller than the girls sample since boys who attend yeshiva middle schools are not included in the analysis. The regressions control for student's background characteristics, cohort mean characteristics and a quadratic function of enrollment in both elementary and middle school, year and grade dummies, and elementary x middle school fixed effects. Robust standard errors clustered by the interaction between elementary and middle school are reported in parenthesis.

Table A8. Falsification Tests for the Proportion Female on Student's Behavior

	Secular and religious elementary schools (5 th and 6 th grades)		Secular middle schools (7 th through 9 th grades)		Full sample (5 th through 9 th)	
	Females (1)	Males (2)	Females (3)	Males (4)	Females (5)	Males (6)
Self-discipline						
1 I understand well my teacher's scholastic requirements	-0.053 (0.066)	0.035 (0.065)	0.057 (0.107)	-0.026 (0.111)	0.003 (0.058)	0.025 (0.058)
2 I know what behavior is allowed or forbidden in school	-0.006 (0.032)	0.114 (0.047)	0.057 (0.069)	0.024 (0.089)	0.027 (0.032)	0.079 (0.043)
3 This year I was involved in many fights	-0.037 (0.070)	-0.189 (0.105)	-0.061 (0.080)	0.156 (0.133)	-0.049 (0.052)	-0.052 (0.083)
4 Sometimes the teachers treat me badly	-0.141 (0.121)	-0.182 (0.128)	-0.469 (0.164)	0.128 (0.164)	-0.249 (0.097)	-0.067 (0.102)
5 When I have a problem at school there is always someone I can turn to (from the teaching staff)	0.057 (0.094)	-0.052 (0.104)	0.331 (0.172)	-0.209 (0.176)	0.171 (0.086)	-0.097 (0.092)
Average effect (signs of items 3,4 are reversed)	0.020 (0.047)	0.077 (0.047)	0.147 (0.075)	-0.063 (0.069)	0.076 (0.040)	0.026 (0.039)
Study Efforts						
6 Weekly hours spent on homework in Math	-0.143 (0.105)	-0.096 (0.103)	0.065 (0.157)	0.131 (0.161)	-0.019 (0.088)	0.003 (0.087)
7 Weekly hours spent on homework in Hebrew	-0.002 (0.111)	-0.194 (0.101)	-0.055 (0.156)	0.174 (0.163)	-0.024 (0.089)	-0.084 (0.087)
8 Weekly hours spent on homework in English	-0.077 (0.107)	-0.165 (0.109)	-0.059 (0.162)	-0.189 (0.157)	-0.035 (0.090)	-0.169 (0.088)
9 Weekly hours spent on homework in Science and Technology	-0.084 (0.114)	-0.058 (0.111)	0.288 (0.162)	0.210 (0.166)	0.054 (0.093)	0.029 (0.093)
Average effect	-0.054 (0.061)	-0.086 (0.053)	0.045 (0.085)	0.061 (0.086)	-0.004 (0.050)	-0.037 (0.046)
Number of students	105,376	107,573	131,389	130,539	236,765	238,112
Number of schools	1,008	1,008	384	384	1,301	1,301

Notes: The table reports falsification tests for the outcomes reported in Table 9. With the exception of 7th grade, the proportion of female students in grade g was replaced with the proportion of female students in grade g-1. The proportion of female students in 7th grade was replaced with the proportion of female students in 9th grade. Regression estimates are from models that include the control variables specified in Table 6. Robust standard errors clustered at the school level are reported in parenthesis.

Figure A1. Average Proportion of Female Students across Schools by Grade

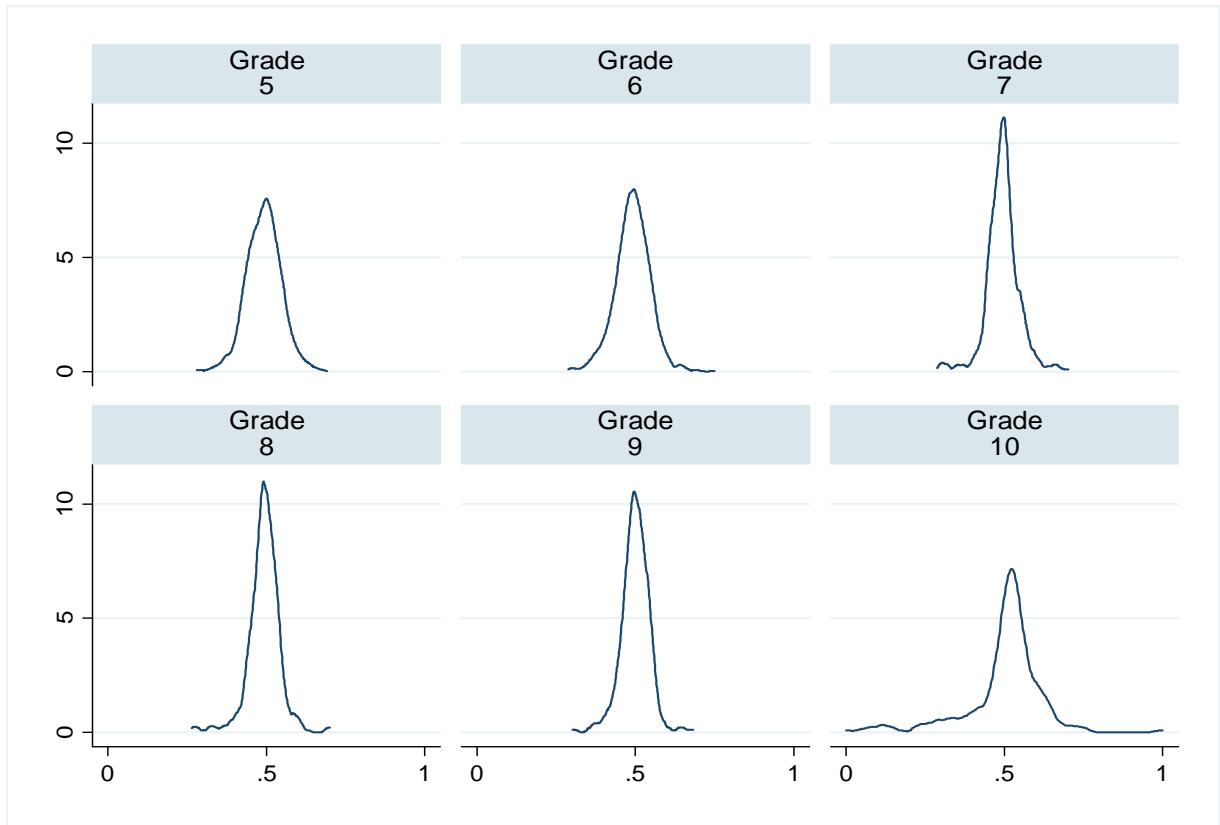
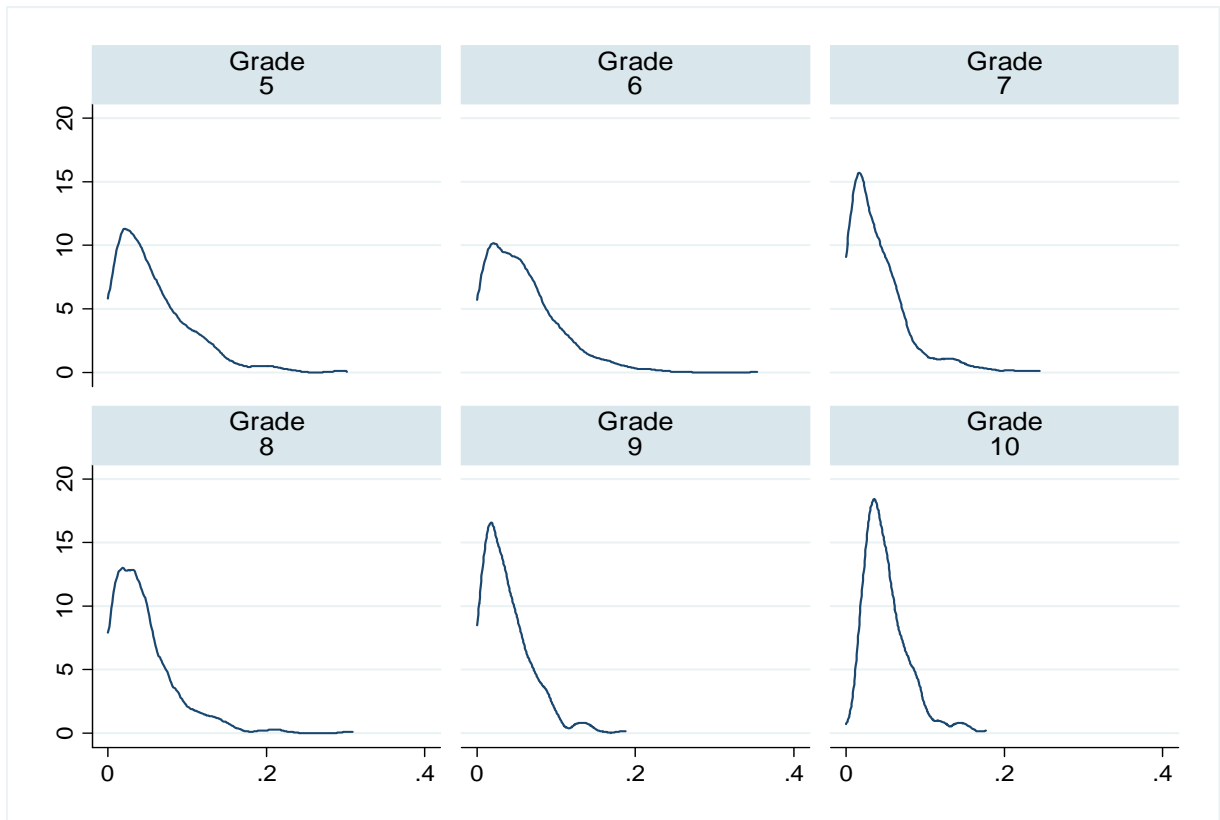


Figure A2. Within School Standard Deviation in the Proportion of Female Students by Grade



Notes: Figure A1 plots the distribution of the school average proportion of female students by grade. Figure A2 plots the distribution of the school standard deviation in the proportion female by grade.