

Time to Misbehave?

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Abstract

Despite the rise in per student expenditures, the stagnation of student achievement in the US is well documented. An often overlooked impediment to student learning is student misbehavior. We explore the impact of organization of the school day on student disciplinary problems, finding a beneficial impact of fewer, but longer, class periods.

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1 Introduction

The stagnation of student achievement over the past few decades in the United States is well-documented (e.g., Epple and Romano 1998; Hoxby 1999), despite the fact that per pupil expenditures have increased an average of roughly 3.5% per annum over the period 1890 – 1990 (Hanushek 1999) and that aggregate public expenditures on primary and secondary education total approximately \$200 billion (Betts 2001). Given the discontinuity that exists between educational expenditures and student achievement, a vast literature has emerged attempting to discover the primary influences on student learning. However, an often overlooked determinant of student outcomes by academic researchers is student misbehavior. This omission has occurred amid a backdrop of rising media attention focused on the disruptive learning environment prevalent in many public schools, as well as recent survey evidence documenting the time wasted by teachers on student discipline and the concomitant negative impact on teacher morale (Figlio 2003). Croom and Moore (2003, p. 14) state that parents recognize student misbehavior as a “serious problem” and that “stricter disciplinary measures are the essential factor in improving schools.” Similarly, Dave Arnold, Illinois Education Association member, states: “As I talk with employees of school districts throughout our nation, they tell me that the lack of student discipline is the biggest problem they face each day. It’s epidemic.” (<http://www.nea.org/espcolumns/dv030708.html>).

Despite this ‘epidemic,’ to our knowledge, research addressing student misbehavior is limited. Lazear (2001) presents a theoretical model linking classroom disruptions to adverse student outcomes. Figlio (2003) documents that disruptive student behavior spills over to peers and adversely impacts peer student test performance. Gaviria and Raphael (2001) assess the importance of peer effects in the decision by students to consume alcohol and/or drugs, as well as drop out of school. The goal of this paper is to contribute to this literature, not by assessing the impact of student misbehavior, but rather by assessing the determinants of such behavior. In this respect, the paper by Gaviria and Raphael (2001) is the most similar previous study. However, instead of focusing on peer effects, we ask if the organization of the school day, measured in terms of the number of class periods and the average length of each class period, affects students’ propensity to misbehave. We focus on such measures as possible determinants for two reasons. First, as noted in DeBruyn (1983) and Croom and Moore (2003), there are three ‘variables’ involved in student misbehavior: the student, the teacher, and the institutional environment. Focusing on the third, we conjecture that school day structure may impact student misbehavior through a variety of channels. For example, longer class periods may give rise to student restlessness, contributing to student misconduct, and may also provide a greater incentive for students to skip class. In addition, more class periods in the day may contribute to student disciplinary problems during the transition between classes. Second, since such organizational details are well within the control of school administrators (and relatively costless to alter), the policy implications should be transparent if school day structure is found to matter. Using a nationally representative sample of tenth grade public school students, we do find a modest impact of school day structure on less severe disruptive student behavior (behavior not rising to the level of suspension). Specifically, fewer, but longer, class periods per day seem preferable in order to minimize students’ propensity to skip class and disobey school rules. The remainder of the paper is organized as follows. Section 2 discusses the data. Section 3 presents the empirical model. Section 4 discusses the results. Section 5 concludes.

2 Data

To analyze the impact of the structure of the school day on the behavior of students, we utilize data from the National Educational Longitudinal Study of 1988 (NELS:88). The NELS:88 is a large longitudinal study of high school students conducted by the National Center for Education Statistics (NCES) beginning in 1988. The NELS:88 sample was chosen in two stages. In the first stage, 1032 schools were selected from a universe of approximately 40,000 schools. In the second stage, up to 26 eighth grade students were selected based on race and gender from each of the sample schools. The original sample contains approximately 25,000 eighth grade students. Follow-up surveys were administered in 1990, 1992, 1994 and 2000. Our sample consists of students who attended public school in tenth grade, and have non-missing data on the relevant behavior and school structure variables for tenth grade.

We examine four measures of student behavior: the number of times the student (i) was punished for not obeying school rules, (ii) was placed in in-school suspension, (iii) was suspended from school, and (iv) skipped class during the first half of tenth grade. These variables are obtained from student records and are categorized in intervals as follows: never, 1-2 times, 3-6 times, 7-9 times or 10 or more times. The relevant variables reflecting the structure of the school day are (i) the number of class periods per school day and (ii) average length per class (in minutes). The former is divided into four categories: six or fewer periods, seven periods, eight periods, or nine or more periods. The latter is split into five categories: 40 minutes or less, 41-45 minutes, 46-50 minutes, 51-55 minutes, and 56 minutes or more. The modal organizational structure is six periods per day or fewer, with an average length of 51-55 minutes per period.

Since researchers interested in the impact of school quality measures on student outcomes (most often student test scores) are typically (and correctly) concerned about the potential endogeneity of school quality (due to endogenous residential location decisions), we utilize a lengthy vector of student and school control variables (see, e.g., Hanushek 1979; Todd and Wolpin 2003). Because we condition on a host of 'traditional' measures of school quality, it seems reasonable to assume that parents are not choosing schools on the basis of the school structure variables which we focus on herein. Moreover, as argued in Hanushek (1979), controlling for family attributes such as socioeconomic status and parental education levels also severely mitigates any bias resulting from endogenous residential choice. Thus, invoking the 'selection on observables' assumption does not seem problematic in the current context.¹ Specifically, individual controls included in the baseline analysis are: gender, race, number of siblings, parental education, family composition, family income, community residence, region, eighth grade composite (math and reading) standardized item response theory (IRT) test scores. Covariates at the school level include: total school enrollment, tenth grade enrollment, percentage of white (non-Hispanic) tenth grade students, percentage of students receiving free (or reduced price) lunch, number of full-time teachers, and number of days in the school year. We utilize dummy variables to control for missing values of the individual and school specific variables.

Information on individual and family characteristics are obtained from the base year questionnaire, and data pertaining to school characteristics and measures of student behavior come from the first-follow up survey. Tables 1 and 2 report the summary statistics of the variables of primary interest, as well as a few select control variables of potential interest, separately by the number of class periods per day (Table 1) and average class length (Table 2).

¹A similar strategy is employed in, for example, Dearden et al. (2002) and Maasoumi et al. (2005).

Table 1. Summary Statistics by Number of Class Periods Per Day

Variable	Mean (Standard Deviation)			
	0-6 Class Periods	7 Class Periods	8 Class Periods	9+ Class Periods
<i>Outcomes</i>				
Trouble (Never)	0.565 (0.495)	0.553 (0.497)	0.563 (0.496)	0.519 (0.500)
Trouble (1-2 times)	0.309 (0.462)	0.313 (0.463)	0.301 (0.459)	0.304 (0.460)
Trouble (3-6 times)	0.081 (0.274)	0.077 (0.267)	0.081 (0.274)	0.102 (0.304)
Trouble (7-9 times)	0.017 (0.132)	0.022 (0.147)	0.018 (0.133)	0.033 (0.180)
Trouble (over 10 times)	0.025 (0.156)	0.033 (0.179)	0.034 (0.182)	0.040 (0.196)
In-School Suspension (Never)	0.867 (0.339)	0.879 (0.325)	0.878 (0.327)	0.887 (0.315)
In-School Suspension (1-2 times)	0.105 (0.307)	0.088 (0.283)	0.085 (0.280)	0.078 (0.269)
In-School Suspension (3-6 times)	0.020 (0.141)	0.021 (0.144)	0.022 (0.148)	0.020 (0.140)
In-School Suspension (7-9 times)	0.002 (0.054)	0.004 (0.068)	0.003 (0.061)	0.008 (0.094)
In-School Suspension (over 10 times)	0.003 (0.059)	0.005 (0.076)	0.009 (0.098)	0.004 (0.066)
Suspended from School (Never)	0.918 (0.273)	0.919 (0.271)	0.931 (0.252)	0.941 (0.234)
Suspended from School (1-2 times)	0.070 (0.255)	0.067 (0.250)	0.056 (0.230)	0.046 (0.211)
Suspended from School (3-6 times)	0.007 (0.085)	0.007 (0.087)	0.007 (0.088)	0.006 (0.081)
Suspended from School (7-9 times)	0.001 (0.044)	0.002 (0.048)	0.0004 (0.021)	0.004 (0.066)
Suspended from School (over 10 times)	0.001 (0.038)	0.002 (0.053)	0.003 (0.061)	0.000 --
Cut/Skip Class (Never)	0.616 (0.486)	0.639 (0.480)	0.611 (0.487)	0.550 (0.498)
Cut/Skip Class (1-2 times)	0.224 (0.417)	0.220 (0.414)	0.222 (0.415)	0.241 (0.428)
Cut/Skip Classl (3-6 times)	0.087 (0.283)	0.074 (0.262)	0.084 (0.278)	0.102 (0.304)
Cut/Skip Classl (7-9 times)	0.027 (0.163)	0.020 (0.142)	0.023 (0.151)	0.026 (0.161)
Cut/Skip Class (over 10 times)	0.043 (0.204)	0.044 (0.206)	0.058 (0.234)	0.078 (0.268)

Table 1 (cont.). Summary Statistics by Number of Class Periods Per Day

Variable	Mean (Standard Deviation)			
	0-6 Class Periods	7 Class Periods	8 Class Periods	9+ Class Periods
<i>Select Control Variables</i>				
Female (1 = Yes)	0.513 (0.499)	0.512 (0.499)	0.495 (0.500)	0.471 (0.499)
White (1 = Yes)	0.624 (0.484)	0.725 (0.446)	0.789 (0.407)	0.782 (0.412)
Black (1 = Yes)	0.115 (0.319)	0.097 (0.296)	0.065 (0.247)	0.050 (0.218)
Hispanic (1 = Yes)	0.145 (0.352)	0.097 (0.296)	0.065 (0.248)	0.062 (0.241)
10th Grade Composite Test Score	49.629 (9.959)	50.190 (9.811)	51.263 (9.866)	53.311 (9.806)
8th Grade Composite Test Score	50.498 (9.952)	50.777 (9.793)	52.339 (9.943)	53.463 (10.123)
% of Students in Remedial Reading	0.085 (0.100)	0.076 (0.081)	0.095 (0.102)	0.086 (0.095)
% of Students in Remedial Math	0.089 (0.103)	0.090 (0.093)	0.081 (0.087)	0.074 (0.079)
% of Students Receiving Free Lunch (0%)	0.034 (0.181)	0.019 (0.136)	0.041 (0.198)	0.000 --
% of Students Receiving Free Lunch (1-10%)	0.393 (0.488)	0.345 (0.475)	0.447 (0.497)	0.510 (0.500)
% of Students Receiving Free Lunch (11-50%)	0.483 (0.499)	0.548 (0.497)	0.418 (0.493)	0.399 (0.490)
% of Students Receiving Free Lunch (51-100%)	0.088 (0.284)	0.086 (0.281)	0.092 (0.290)	0.090 (0.286)
Observations	6194	4264	2146	447
Fraction of Sample	0.474	0.326	0.164	0.034

Table 2. Summary Statistics by Average Class Length

Variable	Mean (Standard Deviation)				
	1-40 Minutes	41-45 Minutes	46-50 Minutes	51-55 Minutes	56+ Minutes
<i>Outcomes</i>					
Trouble (Never)	0.570 (0.495)	0.565 (0.495)	0.554 (0.497)	0.562 (0.496)	0.548 (0.497)
Trouble (1-2 times)	0.274 (0.446)	0.308 (0.462)	0.312 (0.463)	0.308 (0.462)	0.321 (0.467)
Trouble (3-6 times)	0.097 (0.296)	0.071 (0.256)	0.081 (0.273)	0.079 (0.093)	0.093 (0.290)
Trouble (7-9 times)	0.023 (0.152)	0.019 (0.138)	0.020 (0.142)	0.020 (0.140)	0.014 (0.119)
Trouble (over 10 times)	0.033 (0.180)	0.035 (0.184)	0.030 (0.171)	0.028 (0.166)	0.022 (0.149)
In-School Suspension (Never)	0.878 (0.326)	0.870 (0.336)	0.885 (0.317)	0.868 (0.338)	0.864 (0.341)
In-School Suspension (1-2 times)	0.090 (0.286)	0.092 (0.289)	0.082 (0.275)	0.104 (0.306)	0.106 (0.308)
In-School Suspension (3-6 times)	0.022 (0.148)	0.024 (0.154)	0.021 (0.143)	0.019 (0.139)	0.019 (0.139)
In-School Suspension (7-9 times)	0.002 (0.053)	0.005 (0.074)	0.004 (0.063)	0.002 (0.053)	0.005 (0.072)
In-School Suspension (over 10 times)	0.005 (0.074)	0.007 (0.084)	0.006 (0.079)	0.004 (0.066)	0.003 (0.061)
Suspended from School (Never)	0.940 (0.236)	0.916 (0.277)	0.927 (0.259)	0.917 (0.275)	0.924 (0.264)
Suspended from School (1-2 times)	0.045 (0.207)	0.074 (0.262)	0.060 (0.237)	0.071 (0.256)	0.064 (0.245)
Suspended from School (3-6 times)	0.009 (0.098)	0.006 (0.081)	0.007 (0.086)	0.007 (0.084)	0.009 (0.095)
Suspended from School (7-9 times)	0.002 (0.053)	0.001 (0.031)	0.002 (0.048)	0.001 (0.043)	0.001 (0.039)
Suspended from School (over 10 times)	0.001 (0.037)	0.002 (0.045)	0.002 (0.048)	0.002 (0.051)	0.0007 (0.027)
Cut/Skip Class (Never)	0.517 (0.500)	0.605 (0.448)	0.642 (0.479)	0.620 (0.485)	0.639 (0.480)
Cut/Skip Class (1-2 times)	0.264 (0.441)	0.233 (0.422)	0.220 (0.414)	0.219 (0.413)	0.212 (0.409)
Cut/Skip Class (3-6 times)	0.106 (0.309)	0.076 (0.265)	0.082 (0.275)	0.086 (0.281)	0.070 (0.256)
Cut/Skip Class (7-9 times)	0.029 (0.169)	0.022 (0.148)	0.019 (0.139)	0.025 (0.159)	0.032 (0.178)
Cut/Skip Class (over 10 times)	0.081 (0.273)	0.062 (0.242)	0.035 (0.184)	0.047 (0.211)	0.044 (0.205)

Table 2 (cont.). Summary Statistics by Average Class Length

Variable	Mean (Standard Deviation)				
	1-40 Minutes	41-45 Minutes	46-50 Minutes	51-55 Minutes	56+ Minutes
<i>Select Control Variables</i>					
Female (1 = Yes)	0.513 (0.500)	0.495 (0.500)	0.507 (0.500)	0.515 (0.499)	0.502 (0.500)
White (1 = Yes)	0.703 (0.457)	0.757 (0.428)	0.732 (0.442)	0.636 (0.481)	0.685 (0.464)
Black (1 = Yes)	0.098 (0.298)	0.076 (0.265)	0.088 (0.284)	0.116 (0.320)	0.090 (0.287)
Hispanic (1 = Yes)	0.111 (0.314)	0.070 (0.255)	0.093 (0.291)	0.141 (0.348)	0.121 (0.327)
10th Grade Composite Test Score	51.195 (10.197)	51.411 (9.909)	50.787 (9.880)	49.284 (9.862)	49.961 (9.817)
8th Grade Composite Test Score	52.398 (10.324)	52.110 (10.227)	51.515 (9.916)	50.102 (9.684)	50.689 (9.987)
% of Students in Remedial Reading	0.118 (0.137)	0.089 (0.093)	0.076 (0.081)	0.082 (0.099)	0.083 (0.076)
% of Students in Remedial Math	0.102 (0.119)	0.090 (0.102)	0.079 (0.082)	0.093 (0.106)	0.077 (0.069)
% of Students Receiving Free Lunch (0%)	0.000 --	0.010 (0.104)	0.049 (0.215)	0.030 (0.172)	0.008 (0.093)
% of Students Receiving Free Lunch (1-10%)	0.474 (0.499)	0.490 (0.500)	0.371 (0.483)	0.361 (0.480)	0.367 (0.482)
% of Students Receiving Free Lunch (11-50%)	0.405 (0.491)	0.392 (0.488)	0.514 (0.499)	0.520 (0.499)	0.500 (0.500)
% of Students Receiving Free Lunch (51-100%)	0.119 (0.325)	0.106 (0.308)	0.065 (0.247)	0.086 (0.280)	0.122 (0.328)
Observations	713	1960	3761	5293	1324
Fraction of Sample	0.054	0.150	0.288	0.405	0.101

Table 3. Interval Regressions of Student Disciplinary Measures on School Day Structure.

Variable	Dependent Variable			
	Trouble	In-School Suspension	Suspended from School	Skip Class
41-45 Minutes	0.055 (0.318)	0.332 (0.588)	0.659 (0.515)	-1.248** (0.561)
46-50 Minutes	-0.015 (0.354)	0.532 (0.646)	0.150 (0.568)	-0.947 (0.618)
51-55 Minutes	0.155 (0.374)	0.716 (0.702)	0.426 (0.630)	-1.005 (0.662)
56+ Minutes	0.210 (0.421)	0.609 (0.733)	0.284 (0.714)	-1.297* (0.717)
7 Class Periods	0.208 (0.191)	-0.333 (0.317)	0.091 (0.341)	0.426 (0.338)
8 Class Periods	0.141 (0.241)	-0.484 (0.464)	-0.457 (0.463)	0.494 (0.423)
9+ Class Periods	1.115** (0.416)	0.273 (0.817)	-0.818 (0.711)	1.486** (0.732)
Joint Significance of Minute Effects	$\chi^2(4) = 1.10$ [p = 0.89]	$\chi^2(4) = 1.14$ [p = 0.88]	$\chi^2(4) = 3.43$ [p = 0.48]	$\chi^2(4) = 5.80$ [p = 0.21]
Joint Significance of Class Period Effects	$\chi^2(3) = 7.77$ [p = 0.05]	$\chi^2(3) = 2.29$ [p = 0.51]	$\chi^2(3) = 3.02$ [p = 0.38]	$\chi^2(3) = 4.39$ [p = 0.22]
Joint Significance of All Time Effects	$\chi^2(7) = 10.20$ [p = 0.17]	$\chi^2(7) = 5.84$ [p = 0.55]	$\chi^2(7) = 6.15$ [p = 0.52]	$\chi^2(7) = 19.08$ [p = 0.00]
Sample Size	11870	11867	11869	11873

NOTES: Robust and clustered (on high school) standard errors are in parentheses. '*' denotes statistical significance at 10%; '**' denotes significance at 5%. Each specification includes controls for individual's race, sex, 8th grade composite (math and reading) test scores, the number of siblings, parent's education, family composition and income, community residence, region, school total enrollment, 10th grade enrollment, 10th grade percent of white students, 10th grade percent of students receiving free lunch, number of full time teachers at the school, and number of school days in the school year.

Table 4. Interval Regressions of Student Disciplinary Measures on School Day Structure: Sensitivity Analysis I

Variable	Dependent Variable			
	Trouble	In-School Suspension	Suspended from School	Skip Class
41-45 Minutes	0.084 (0.305)	0.238 (0.587)	0.664 (0.501)	-1.142** (0.546)
46-50 Minutes	-0.053 (0.339)	0.399 (0.660)	0.157 (0.554)	-1.036* (0.610)
51-55 Minutes	0.090 (0.361)	0.529 (0.715)	0.337 (0.622)	-1.107* (0.660)
56+ Minutes	0.182 (0.402)	0.484 (0.742)	0.238 (0.705)	-1.414** (0.715)
7 Class Periods	0.213 (0.187)	-0.396 (0.316)	0.043 (0.341)	0.427 (0.336)
8 Class Periods	0.107 (0.238)	-0.449 (0.462)	-0.455 (0.455)	0.428 (0.418)
9+ Class Periods	1.165** (0.406)	0.384 (0.830)	-0.435 (0.700)	1.384* (0.743)
Joint Significance of Minute Effects	$\chi^2(4) = 1.18$ [p = 0.88]	$\chi^2(4) = 0.59$ [p = 0.96]	$\chi^2(4) = 3.15$ [p = 0.53]	$\chi^2(4) = 5.57$ [p = 0.23]
Joint Significance of Class Period Effects	$\chi^2(3) = 9.37$ [p = 0.02]	$\chi^2(3) = 2.87$ [p = 0.41]	$\chi^2(3) = 1.97$ [p = 0.57]	$\chi^2(3) = 3.82$ [p = 0.28]
Joint Significance of All Time Effects	$\chi^2(7) = 11.75$ [p = 0.10]	$\chi^2(7) = 5.87$ [p = 0.55]	$\chi^2(7) = 4.40$ [p = 0.73]	$\chi^2(7) = 18.88$ [p = 0.00]
Sample Size	11870	11867	11869	11873

NOTES: Control set identical to Table 3, with the addition of tenth grade average composite test score at the school-level, the percentage of remedial math and reading students at the school-level, and the percentage of LEP students at the school-level.

'*' denotes statistical significance at 10%; '**' denotes significance at 5%. See Table 3 and text for further details.

Table 5. Interval Regressions of Student Disciplinary Measures on School Day Structure: Sensitivity Analysis II

Variable	Dependent Variable			
	Trouble	In-School Suspension	Suspended from School	Skip Class
41-45 Minutes	0.137 (0.314)	0.421 (0.569)	0.821 (0.505)	-1.006** (0.509)
46-50 Minutes	0.129 (0.346)	0.692 (0.630)	0.331 (0.556)	-0.644 (0.587)
51-55 Minutes	0.309 (0.369)	0.875 (0.686)	0.576 (0.617)	-0.659 (0.633)
56+ Minutes	0.482 (0.410)	0.767 (0.716)	0.467 (0.693)	-0.783 (0.696)
7 Class Periods	0.312* (0.186)	-0.266 (0.320)	0.179 (0.339)	0.491 (0.334)
8 Class Periods	0.198 (0.226)	-0.461 (0.460)	-0.387 (0.452)	0.421 (0.423)
9+ Class Periods	0.952** (0.415)	-0.036 (0.808)	-1.158 (0.698)	1.314** (0.633)
Joint Significance of Minute Effects	$\chi^2(4) = 2.42$ [p = 0.65]	$\chi^2(4) = 1.70$ [p = 0.79]	$\chi^2(4) = 4.20$ [p = 0.37]	$\chi^2(4) = 4.15$ [p = 0.38]
Joint Significance of Class Period Effects	$\chi^2(3) = 6.56$ [p = 0.08]	$\chi^2(3) = 1.34$ [p = 0.71]	$\chi^2(3) = 5.14$ [p = 0.16]	$\chi^2(3) = 4.85$ [p = 0.18]
Joint Significance of All Time Effects	$\chi^2(7) = 7.45$ [p = 0.38]	$\chi^2(7) = 5.89$ [p = 0.55]	$\chi^2(7) = 9.71$ [p = 0.20]	$\chi^2(7) = 14.78$ [p = 0.03]
Sample Size	11710	11708	11709	11396

NOTES: Control set identical to Table 3, with the addition of eighth grade behavior proxy. '*' denotes statistical significance at 10%; '**' denotes significance at 5%. See Table 3 and text for further details.

Table 6. Interval Regressions of Student Disciplinary Measures on School Day Structure: Sensitivity Analysis III

Variable	Dependent Variable			
	Trouble	In-School Suspension	Suspended from School	Skip Class
41-45 Minutes	0.171 (0.310)	0.363 (0.580)	0.846* (0.498)	-0.963** (0.402)
46-50 Minutes	0.109 (0.343)	0.589 (0.653)	0.336 (0.550)	-0.755 (0.582)
51-55 Minutes	0.259 (0.366)	0.704 (0.709)	0.486 (0.615)	-0.777 (0.632)
56+ Minutes	0.463 (0.402)	0.641 (0.734)	0.424 (0.690)	-0.926 (0.693)
7 Class Periods	0.326* (0.182)	-0.302 (0.321)	0.126 (0.341)	0.525 (0.332)
8 Class Periods	0.168 (0.224)	-0.401 (0.458)	-0.402 (0.448)	0.400 (0.418)
9+ Class Periods	0.973** (0.408)	0.087 (0.825)	-0.827 (0.685)	1.193* (0.640)
Joint Significance of Minute Effects	$\chi^2(4) = 2.50$ [p = 0.64]	$\chi^2(4) = 1.02$ [p = 0.90]	$\chi^2(4) = 4.19$ [p = 0.38]	$\chi^2(4) = 3.93$ [p = 0.41]
Joint Significance of Class Period Effects	$\chi^2(3) = 7.68$ [p = 0.05]	$\chi^2(3) = 1.45$ [p = 0.69]	$\chi^2(3) = 3.23$ [p = 0.35]	$\chi^2(3) = 4.39$ [p = 0.22]
Joint Significance of All Time Effects	$\chi^2(7) = 8.64$ [p = 0.27]	$\chi^2(7) = 4.41$ [p = 0.73]	$\chi^2(7) = 7.18$ [p = 0.41]	$\chi^2(7) = 14.39$ [p = 0.04]
Sample Size	11710	11708	11709	11396

NOTES: Control set identical to Table 4, with the addition of eighth grade behavior proxy. '*' denotes statistical significance at 10%; '**' denotes significance at 5%. See Table 3 and text for further details.