Appendix to "Education, Health and Wages" *

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Abstract

This paper defines and estimates the causal benefits of different levels of schooling on health and labor market outcomes using a computationally tractable model. We decompose treatment effects of education into direct benefits of attaining a given level of schooling and the benefits flowing from the option of continuing schooling that arise from completing a given level of schooling. Half to two-thirds of the educational benefits found in the raw data are due to these causal effects. Continuation values are an important component of treatment effects. Both cognitive and socioemotional factors contribute substantially to shaping educational choices and educational outcomes. We improve on LATE by identifying the groups affected by variations in the instruments. Unlike most of the literature on the treatment effects of education, we analyze a model with multiple schooling choices that recognizes the fundamentally nonlinear effect of schooling on a variety of outcomes. Most of the effects of socioemotional skills on outcomes come through their effects on education. There are additional benefits of cognition on most outcomes across education levels beyond their effects on education.

Keywords: education, early endowments, factor models, health, treatment effects.
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A Description of the Data Used

This analysis uses the 1979 National Longitudinal Survey of Youth (NLSY79), a nationally representative sample of men and women born in the years 1957-64.The NLSY79 includes both a randomly chosen sample of 6,111 U.S. youth and a supplemental sample of 5,295 randomly chosen Black, Hispanic, and non-Black non-Hispanic economically disadvantaged youth. Both of these samples are drawn from the civilian population. In addition, there is a small sample of individuals (1,280) who were enrolled in the military in 1979. The respondents were first interviewed in 1979 when they were 14-22 years of age. The NLSY surveyed its participants annually from 1979 to 1992, and has surveyed them biennially since 1992. The NLSY measures a variety of later-life outcomes including labor market flows, asset and transfer income, and health outcomes. The survey measures many other aspects of the respondents' lives, such as scores on achievement tests, fertility, educational attainment, high school grades, and demographic information. This paper uses the core sample of males, which, after removing observations with missing covariates, contains 2242 individuals.[1]

A.1 Outcomes

As a measure of physical health, we use the PCS-12 scale. The PCS-12 scale is the Physical Component Summary obtained from SF-12 measured at age 40.[2] The SF-12 is designed to provide a measure of the respondent's mental and physical health irrespective of their proclivity to use formal health services. We analyze smoking at age 30 as an additional measure of physical health . Smoking at age 30 is self reported and is defined as a binary variable equal to one if the individual smoked daily at age 30. Self-esteem is also analyzed as a measure of mental health. Self esteem is measured using Rosenberg's Self-esteem scale (collected in 2006, when individuals were in their 40s). Respondents with a score above (below) 50 have better (worse) health than the typical person in the general U.S. population. Each one-point difference above or below 50 corresponds to one-tenth of a standard deviation. For example, a person with a score of 30 is two standard deviations below the mean. We standardize the PCS-12 score to have mean zero

[1] Respondents were dropped from the analysis if they did not have valid ASVAB scores, missed multiple rounds of interviews, had educational histories where true education could not be inferred, were missing control variables which could not be imputed, or had extreme and incomplete labor market histories. A number of imputations were made as necessary. Previous years' covariates were used when covariates where not available for a given year (such as region of residence). Responses from adjacent years were used for some outcomes when outcome variables were missing at the age of interest. Mother's education and father's education were imputed when missing.

[2] SF-12 is a 12-question health survey designed by John Ware of the New England Medical Center Hospital (see (Ware, Kosinski, and Keller, 1996), and (Gandek, Ware, Aaronson, Apolone, Bjorner, Brazier, Bullinger, Kaasa, Leplege, Prieto, and Sullivan, 1998)).

and variance one in the overall population.

Rosenberg's Self-Esteem Scale consists of 11 items which are answered on a 4-point scale (4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree). An index score is constructed by summing the scores from the items and standardizing the scores to have mean 0 and variance 1 in the overall population (Rosenberg, 1965).

As a measure of physical health, we construct an obesity indicator based on BMI. BMI is calculated as BMI=(Weight in Pounds * 703)/(Height in inches)^2, and the obesity indicator takes a value of one if the BMI is 30 and above, and zero otherwise.

A.2 Schooling Levels

We consider four different transitions and five final schooling levels as depicted in Figure 2 of the text. The transitions studied are (i) enrolled in high school deciding between graduating from high school and dropping out from high school, (ii) high school dropouts deciding whether or not to get the GED, (iii) high school graduates deciding whether or not to enroll in college, and (iv) college students deciding whether or not to earn a 4-year degree. Consequently, the final schooling levels are (I) high school dropout, (II) GED, (III) High school graduate, (IV) some college and (V) four-year college degree. Education at age 30 is treated as respondent's final schooling level.[3] Schooling levels are not an ordered set, calling into question the standard procedure of using years of schooling in analyzing the benefits of education. Thus, following the notation introduced in Section 2.1, the indicator variable for a college graduate is defined as $s = 4$ if and only if $D_{0,1} = D_{1,3} = D_{3,4} = 1$

A.3 Measurement System

The cognitive and socioemotional factors in the model are identified from the joint estimation of the educational choices of agents as well as a supplemental measurement system of tests and other early-life outcomes. Sub-tests from the Armed Services Vocational Aptitude Battery (ASVAB) are used as measures of cognitive ability. Specifically, we consider the scores from Arithmetic Reasoning, Coding Speed, Paragraph Comprehension, World Knowledge, Math Knowledge, and Numerical Operations.[4]

To identify the socioemotional factor, we use participation in minor risky or reckless activity

[3] A negligible fraction of individuals change schooling levels after age 30.

[4] A subset of these tests are used to construct the Armed Forces Qualification Test (AFQT) score, which is commonly used as a measure of cognitive ability. AFQT scores are often interpreted as proxies for cognitive ability (Herrnstein and Murray, 1994). See the discussion in Almlund, Duckworth, Heckman, and Kautz (2011).

in 1979 in the measurement system for the socioemotional endowment.[5] In order to identify the distribution of correlated factors, risky behavior is restricted to not load on the cognitive factor.

Many psychologists use a socioemotional taxonomy called the Big Five (John, Robins, and Pervin, 2008). This is an organizing framework that categorizes personality traits into 5 categories. The five traits are extraversion, agreeableness, conscientiousness, neuroticism, and openness. A growing body of work suggests that these traits and other socioemotional traits play key roles in academic success. Borghans, Golsteyn, Heckman, and Humphries (2011) and Almlund, Duckworth, Heckman, and Kautz (2011) show that the principal determinants of the grade point average are personality traits and not cognition. Similarly, Duckworth and Seligman (2005) find that self-discipline predicts GPA in 8th graders better than IQ. Duckworth, Quinn, and Tsukayama (2010) report three studies to show that self-control predicts grades earned in middle school better than IQ across racial and socioeconomic groups. Farsides and Woodfield (2003), Conard (2006), and Noftle and Robins (2007) find that Big 5 traits positively predict grades and academic success. These studies find predictive power after controlling for previous grades or test scores. In these studies, the benefits of personality traits are mediated through behaviors such as increased attendance or increased academic effort. A meta-analysis by Credé and Kuncel (2008) finds that study habits, skills, and attitudes have similar predictive power as standardized tests and previous grades in predicting college performance. They find that study skills are largely independent of high school GPA and standardized admissions tests, but have moderate correlations with personality traits.

The evidence that academic success (such as GPA) depends on cognitive ability, but also depends strongly on socioemotional traits such as conscientiousness, self-control, and self-discipline, motivates our identification strategy of including both a cognitive and socioemotional factor in 9th grade GPA. Much of the variance not explained through test scores has been shown to be related to socioemotional traits. Socioemotional skills are measured in part by their contribution towards 9th grade GPA in reading, social studies, science, and math.

GPA by grade and subject is constructed from high school transcript records. Up to 64 courses were recorded from school transcripts and included year taken, grade level taken, a class identification code, and the grade received. Using the class identification code, we identified all courses taken in either reading, social studies, science, or math in 9th grade and constructed

[5] Preliminary data analysis suggested this measure was the least correlated with cognitive endowments among the available measures. This is a binary variable which is one if an agent answers yes to any of the following questions in 1980: "Taken something from the store without paying for it," "Purposely destroyed or damaged property that did not belong to you?," "Other than from a store, taken something that did not belong to you worth under $50?," and "Tried to get something by lying to a person about what you would do for him, that is, tried to con someone?"

subject level GPAs

As a robustness check for our measure of socioeconomic skills, we include five additional measures of adverse adolescent behavior to check our interpreting of the non-cognitive factor.[6] We consider violent behavior in 1979 (fighting at school or work and hitting or threatening to hit someone), tried marijuana before age 15, daily smoking before age 15, regular drinking before age 15, and any intercourse before age 15. For violent behavior, we control for the potential effect of schooling. We estimate the cognitive and socioemotional distributions jointly with the educational choice system to account for the effect of schooling at the time of the measurement on measures of ability following the procedure developed in Hansen, Heckman, and Mullen (2004).

A.4 Control Variables

The variables used to control for observed characteristics depend on the timing and nature of the decision being made. In every outcome, measure, and educational choice, we control for race, broken home status, number of siblings, mother's education, father's education, and family income in 1979. We additionally control for region of residence and urban status at the time the relevant measure, decision, or outcome was determined.[7] For log wages at age 30, we additionally control for local economic conditions at age 30. When region of residence or urban status are not available for the age of a particular measure or outcome, the answer from previous or following surveys are used.

The educational choice models include additional choice-specific covariates. Following Carneiro, Heckman, and Vytlacil (2011), we control for both long run economic conditions, and contemporaneous deviations from those conditions. Controlling for the long-run local economic environment, local unemployment deviations capture contemporaneous economic shocks. The model for the choice to GED certify additionally controls for the difficulty of getting the GED within the state of residence in 1988.[8] The choices to enroll in college and graduate from college control for local 4-year college tuition at age 17 and 22 respectively.[9] When an instrument is missing for a particular age, the value from the previous or proceeding year is used.

[6] Gullone and Moore (2000) present a line of research which studies the relationship between personality traits and adolescent risk-behavior. Our five additional measures of early adverse behavior help demonstrate that our socioemotional factor is capturing traits that then explain these observed behaviors in an expected manner.

[7] Based on the data, we assume that high school, GED certification, and college enrollment decisions occur at age 17 while the choice to graduate from college is made at age 22.

[8] GED difficulty is proxied by the percent of high school graduates able to pass the test in one try given the state's chosen average and minimum score requirements.

[9] The cost of college, or the difficulty of earning a GED may affect an individual's choice to graduate from high school. In preliminary models, we found these "forward looking" variables to be statistically insignificant in the choice to graduate from high school and they are excluded from the high school choice.

The equation system for GPA controls for the variables used in all of our analyses, except for region dummies which are not available prior to 1979. The GPA model alternatively controls for urban status at age 14 and Southern residence at age 14. The ASVAB test scores models control for the standard controls, age, and age squared. As previously noted above, the ASVAB tests are estimated separately by education at the time of the test. Risky behavior in 1979 model controls for the standard controls, age and age squared. The risky behavior measure is also estimated by educational group, but due to data limitations pools high school graduates and those enrolled in college in 1979.

The equations for log wages at age 30 controls for race, parents' education, broken home status, number of siblings, region of residence at age 30, and local unemployment rates at age 30. Smoking at age 30 includes the same controls, but excludes unemployment rates. Physical health and Rosenberg self-esteem at age 40 control for the same variables as smoking, but use region of residence at age 40 rather than 30. The variables used and the exclusions are presented in Table 2 of the main text.

A.5 Constructing the Data

As a baseline, our National Longitudinal Survey of Youth 1979 dataset uses the NLSY79 dataset used in Heckman, Stixrud, and Urzua (2006), Urzua (2008), and Heckman (2001). Furthermore, we use instruments from Carneiro, Heckman, and Vytlacil (2011). We supplement this baseline dataset with grades from high school transcripts, risky behaviors at young ages, and later life outcomes that were not previously available, such as physical health at age 40. Table 1 provides an overview of how our base sample is constructed, and how many observations are lost at each point.

Table 1: NLSY79 Data Set Construction and Effect of Deletions

Observations	**Details**
3,002	Core representative male NLSY population
2,975	require schooling defined (GED or HS) for 12 years completed
2,905	Not employed by military
2,763	Not enrolled in education at 30 years old
2,242	Require no missing education, covariates, ASVAB, Rosenberg, and, instruments (Heckman, Stixrud, and Urzua (2006) sample)

B A Summary of the Literature on the Causal Impact of Education on Health

The literature finds that health and education are positively correlated both at the individual level (for example Grossman (1975)) and at the country level (see Jayachandran and Lleras-Muney (2009) for an overview). More recently, the literature has focused on the causal relationship between education and health. While some papers have looked at how health affects educational attainment (Madsen, 2012), most papers focus on the causal impact of education on later life health outcomes and health-related behaviors.[10] Most of the literature uses natural experiments to evaluate the "causal" impact of additional education on health. Using instrumental variables or regression discontinuity, these papers require a valid instrument and typically need large samples. Many of these paper exploit changes in mandatory schooling requirements in the early 20th century. Lleras-Muney (2005) uses the US Census to construct synthetic panels and evaluates the impact of compulsory education laws in 1915 and 1939 and finds that increases in schooling lead to a significant decrease in mortality. Similarly, van Kippersluis, O'Donnell, and van Doorslaer (2011) finds that changes in compulsory schooling laws in the Netherlands decreased mortality rates for elderly men. Kemptner, Jurges, and Reinhold (2011) considers compulsory school changes in Germany in 1949 and 1969 and find that additional schooling lower the prevalence of long term illness and weak evidence that it reduced obesity, but no evidence that it reduced smoking.

Not all of this literature finds a statistically significant role of education on health. Albouy and Lequien (2009) finds no statistically significant evidence of education decreasing mortality using French schooling reforms. Arendt (2005) finds no statistically significant impact of education on self reported health and BMI using Danish data.

The instrumental variables literature suggests changes in compulsory schooling causally increased health, but this literature is limited in a number of ways. Fist, these natural experiments focus on changes in compulsory schooling levels that are well below current requirements, and the health gains may not extrapolate to current educational decisions such as graduating from high school or college. Second, the natural experiments focus on changes predominantly at the beginning of the twentieth century – which may not extrapolate to current conditions. Third, these natural experiments may demonstrate causal benefits, but they do not help us understand the causal pathways. Oreopoulos and Salvanes (2011) overviews the potential ways schooling

[10] Conti and Heckman (2010) models both the causal role of education on health and the role of early health on education and later health

may lead to non-pecuniary benefits, such as health.[11] Cutler and Lleras-Muney (2010) reviews the literature on the causal benefits of education on health and similarly discusses the pathways though which education may act, and when possible, tries to test these hypotheses. The authors summarize their results as finding that resources such as income or health insurance can explain 11-32 percent of the education-health behavior gradient, cognitive ability accounts for 30 percent (though they note this is just their best guess), and social integration accounts for 11 percent of the gradient. Notably, Cutler and Lleras-Muney (2010) finds that discount rate, risk aversion, and value of the future, as well as personality factors, do not account for any of the education-health gradient. While this is a featured result of their paper, the proxies for these parameters used by the authors are quite weak. For example, discount rates were proxied using a question from the MIDUS survey which asks how strongly the respondent agrees with the statement "I live one day at a time and don't really think about the future" and the value of the future is measured with respondent's answer to the question "Looking ahead ten years into the future, what do you expect your life will overall be like at that time?" Similarly, measures of personality are restricted to measures of impulsiveness or lack of self-control. We believe that being limited to rough proxies of economic parameters and personality should temper the conclusions reached by the authors.

While not directly comparable to Cutler and Lleras-Muney (2010), Conti and Heckman (2010) find that non-cognitive ability plays an important role in health outcomes. It finds that the importance of cognitive ability is overstated when non-cognitive ability is not included and that education has a causal impact on health. Prior to Conti and Heckman (2010), Auld and Sidhu (2005) attempts to disentangle the causal roles of cognition and education on health. The paper sets up an extended Grossman model where schooling, cognitive ability, and material inputs enter the production of health. The paper then estimates the model using the NLSY79 and an instrumental variables technique (with local unemployment rates and parents' education as instruments). The paper uses a question on if health limits the amount of work an individual can perform as their later-life measure of health. Once accounting for cognition, the paper finds that there is little statically significant evidence that education affects health outcomes. The paper finds that benefits are the largest for those with low educational attainment.

Many other papers develop frameworks for integrating health into economic models. The most broadly known is the Grossman model (see Grossman (2000)). Many extensions or adaption of the Grossman model have been considered. (for example Galama (2011)). Similarly, Cervellati and Sunde (2013) extends the Ben-Porath model to consider how increased life expectancy

[11] The paper also provides an overview of different approaches taken by the literature to establish causal relationships.

changes education and labor supply decisions.

For additional overviews of the associations between education and health activities. See Cawley and Ruhm (2012) for an overview of the causal impacts of education on risky behaviors, Chaloupka and Warner (2000) for smoking, and Cook and Moore (2000) for drinking.

C Model Estimates

C.1 Models for the Measurement System

Table 2: Estimates for Schooling Choice Model

Variable	$D_{0,1}$: Graduate HS vs. Drop out of HS		$D_{0,2}$: **GED** vs. **HS Dropout**		$D_{1,3}$: Enroll College vs. **HS Graduate**		$D_{3,4}$: **4-year College Degree** vs. **Some College**	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Black	0.075	0.129	-0.119	0.178	0.174	0.140	0.010	0.196
Hispanic	0.649	0.179	-0.083	0.252	0.643	0.175	0.410	0.255
Broken Home	-0.484	0.101	-0.240	0.140	-0.047	0.103	-0.278	0.141
Number of Siblings	-0.048	0.019	0.003	0.027	-0.053	0.019	-0.028	0.027
Mother's Education	0.127	0.022	0.073	0.033	0.097	0.021	0.100	0.027
Father's Education	0.066	0.016	0.038	0.026	0.127	0.015	0.103	0.019
Family Income	0.020	0.005	0.018	0.008	0.012	0.004	0.013	0.004
Intercept	-1.288	0.525	-0.931	0.874	-3.616	0.483	-2.863	0.646
Urban (age 17)	-0.179	0.097	0.508	0.161	0.153	0.088		
South (age 17)	-0.412	0.121	0.331	0.193	0.170	0.117		
West(age 17)	-0.398	0.125	0.209	0.211	-0.172	0.128		
Northeast (age 17)	0.213	0.124	0.136	0.222	0.400	0.107		
Local Unemployment (age 17)	2.887	1.756	5.344	2.872	3.948	1.628		
Local Long-run Unemployment	-10.992	4.347	-2.217	6.859	-5.127	4.051	-4.070	4.828
Age	0.043	0.019	-0.046	0.031	0.051	0.019	0.012	0.023
GED Passrate			-0.001	0.068				
Local 4-year College Tuition (age 17)					-0.261	0.059		
Local Unemployment (age 22)							-1.078	1.722
Local 4-year College Tuition (age 22)							-0.022	0.085
Urban (age 22)							0.058	0.131
South (age 22)							-0.107	0.153
West (age 22)							-0.469	0.180
Northeast (age 22)							0.031	0.154
Cognitive	0.823	0.093	1.011	0.138	0.846	0.092	0.833	0.114
Socioemotional	0.983	0.090	0.169	0.144	0.493	0.082	0.587	0.115
N	2242		522		1720		891	

Notes: The numbers in this table represent the estimated coefficients and standard errors associated with the node-specific educational choice models for the sequential education model. Terminal schooling levels are highlighted in bold. (a) Local average unemployment is the average local unemployment level over the previous 5 years. Local unemployment is the current unemployment rate. GED difficulty is the estimated number of high school graduates able to pass the test on a single try given the state's passing standard. Unemployment variables, tuition, region dummies, and urban status are as of age 17 for high school graduation, GED certification, and college enrollment choices. Tuition, unemployment variables, region dummies, and urban status are at age 22 for the choice to graduate from college.

Table 3: Measurement System: Estimates for Grades in 9th year and Adolescent Risky or Reckless Behavior

Variable	Language Arts GPA		Social Studies GPA		Science GPA		Math GPA		Reckless (HS $<$ 12 years)		Reckless (HS Grad)	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Black	-0.258	0.074	-0.270	0.078	-0.339	0.079	-0.260	0.076	0.089	0.122	-0.076	0.157
Hispanic	0.196	0.092	0.151	0.098	0.097	0.100	0.036	0.094	-0.201	0.156	-0.072	0.207
Broken Home	-0.080	0.055	-0.072	0.059	-0.165	0.057	-0.057	0.057	0.230	0.090	-0.038	0.116
Number of Siblings	-0.035	0.010	-0.018	0.011	-0.010	0.011	-0.010	0.011	-0.002	0.017	0.070	0.022
Mother's Education	0.039	0.011	0.043	0.012	0.050	0.011	0.025	0.011	-0.018	0.019	-0.005	0.023
Father's Education	0.030	0.008	0.029	0.009	0.031	0.008	0.024	0.008	0.021	0.015	0.020	0.016
Family Income	0.005	0.002	0.008	0.002	0.005	0.002	0.003	0.002	0.005	0.004	-0.001	0.003
Intercept	-1.001	0.133	-0.973	0.143	-0.918	0.137	-0.602	0.138	-1.526	3.446	7.956	10.323
Urban	0.018	0.046	-0.064	0.049	-0.109	0.046	-0.026	0.048				
South	0.065	0.046	0.042	0.048	0.013	0.047	-0.004	0.048				
Urban									0.170	0.089	-0.032	0.104
South									-0.215	0.093	-0.210	0.113
West									0.074	0.114	-0.008	0.132
Northeast									-0.095	0.115	0.146	0.122
Age									0.211	0.369	-0.677	0.987
Age^2									-0.007	0.010	0.014	0.024
College Attendance											0.095	0.120
Cognitive	0.452	0.057	0.509	0.057	0.501	0.056	0.447	0.052	—	—	—	—
Socio-emotional	1.000		0.939	0.041	0.914	0.040	0.825	0.039	-0.076	0.157	-0.636	0.078
Std. Error	0.535	0.015	0.567	0.015	0.542	0.014	0.695	0.014				
N	1772		1438		1493		1840		1249		897	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the factor models of grades (column) on the set of controls presented in rows. GPA refers to grades received in 9th grade core classes. Reckless refers to comitting minor risky or reckless behavior. "—" denotes fixed at zero.

Table 4: Measurement System: Cognitive Test Scores - <12 Years of Education at the time of the test

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Black	-0.636	0.078	-0.778	0.082	-0.635	0.089	-0.546	0.084	-0.462	0.075	-0.560	0.078
Hispanic	-0.138	0.102	-0.076	0.106	-0.010	0.116	-0.010	0.110	0.050	0.098	0.052	0.102
Broken Home	-0.084	0.056	-0.035	0.059	-0.075	0.065	-0.036	0.061	-0.080	0.054	-0.032	0.057
Number of Siblings	-0.011	0.011	-0.040	0.011	-0.038	0.012	-0.024	0.012	-0.009	0.010	-0.016	0.011
Mother's Education	0.058	0.012	0.082	0.013	0.079	0.014	0.041	0.013	0.066	0.012	0.038	0.012
Father's Education	0.031	0.010	0.040	0.010	0.043	0.011	0.030	0.010	0.043	0.009	0.020	0.010
Family Income	0.012	0.003	0.009	0.003	0.009	0.003	0.011	0.003	0.012	0.003	0.012	0.003
Intercept	-0.775	2.168	-0.773	2.294	-2.406	2.503	-0.802	2.386	-1.791	2.088	-3.981	2.236
Urban	0.079	0.056	0.095	0.059	0.013	0.064	0.104	0.062	0.079	0.054	0.047	0.058
South	-0.037	0.059	-0.133	0.062	-0.071	0.068	-0.097	0.065	0.034	0.056	-0.021	0.061
West	0.057	0.071	0.042	0.075	0.003	0.082	-0.005	0.078	0.022	0.068	-0.038	0.073
Northeast	0.031	0.073	-0.058	0.077	-0.002	0.084	-0.010	0.080	0.094	0.070	-0.073	0.075
Age	-0.089	0.230	-0.138	0.244	0.014	0.266	-0.065	0.254	0.013	0.222	0.256	0.238
Age^2	0.003	0.006	0.005	0.006	0.002	0.007	0.002	0.007	-0.000	0.006	-0.006	0.006
Cognitive	1.000		0.930	0.038	1.072	0.042	0.895	0.039	0.944	0.032	0.739	0.037
Socio-emotional	—	—	—	—	—	—	—	—	—	—	—	—
Std. Error	0.458	0.014	0.560	0.015	0.580	0.017	0.617	0.016	0.455	0.014	0.619	0.015
N	988		988		988		988		988		988	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the factor equations of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed at zero.

Table 5: Measurement System: Cognitive Test Scores - 12 Years of Education at the time of the test

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Black	-0.855	0.098	-0.932	0.091	-0.739	0.096	-0.732	0.104	-0.402	0.095	-0.716	0.099
Hispanic	-0.111	0.135	-0.081	0.123	0.173	0.130	0.096	0.141	0.057	0.130	0.175	0.133
Broken Home	-0.089	0.077	-0.077	0.070	-0.104	0.074	-0.021	0.080	-0.139	0.075	0.110	0.075
Number of Siblings	-0.003	0.014	-0.059	0.013	-0.047	0.013	-0.010	0.014	-0.031	0.013	-0.008	0.014
Mother's Education	0.046	0.015	0.040	0.014	0.038	0.014	0.019	0.016	0.043	0.014	0.029	0.015
Father's Education	0.048	0.011	0.047	0.010	0.049	0.011	0.045	0.011	0.063	0.010	0.037	0.011
Family Income	0.005	0.003	0.004	0.003	0.003	0.003	0.012	0.003	0.005	0.003	0.008	0.003
Intercept	7.314	4.318	5.868	3.972	8.867	4.190	5.550	4.537	4.276	4.171	-1.514	4.295
Urban	-0.038	0.062	0.027	0.058	-0.009	0.061	-0.109	0.067	0.013	0.060	-0.052	0.063
South	-0.066	0.070	-0.058	0.065	-0.072	0.068	-0.123	0.074	-0.049	0.068	-0.187	0.071
West	-0.155	0.084	-0.049	0.078	-0.138	0.082	-0.130	0.089	-0.143	0.081	-0.192	0.085
Northeast	0.161	0.080	0.097	0.074	0.069	0.078	-0.073	0.084	0.202	0.077	-0.002	0.080
Age	-0.867	0.425	-0.728	0.392	-0.997	0.413	-0.640	0.447	-0.513	0.411	0.010	0.424
Age^2	0.023	0.010	0.020	0.010	0.026	0.010	0.016	0.011	0.012	0.010	0.001	0.010
Cognitive	1.107	0.053	0.842	0.047	0.916	0.050	0.911	0.054	1.036	0.051	0.744	0.050
Socio-emotional	—	—	—	—	—	—	—	—	—	—	—	—
Std. Error	0.462	0.016	0.540	0.016	0.555	0.016	0.644	0.018	0.472	0.016	0.660	0.017
N	832		832		832		832		832		832	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed to zero.

Table 6: Measurement System: Cognitive Test Scores - >12 Years of Education at the time of the test

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Black	-0.836	0.105	-0.588	0.086	-0.377	0.090	-0.750	0.120	-0.688	0.115	-0.600	0.131
Hispanic	-0.366	0.114	-0.277	0.105	-0.224	0.111	0.068	0.147	-0.128	0.129	0.100	0.162
Broken Home	0.007	0.085	-0.031	0.069	-0.163	0.072	-0.052	0.096	-0.169	0.093	-0.060	0.105
Number of Siblings	-0.016	0.019	-0.025	0.013	-0.027	0.014	-0.019	0.018	-0.012	0.020	-0.055	0.020
Mother's Education	0.054	0.014	0.016	0.012	0.014	0.013	0.002	0.017	0.036	0.015	0.050	0.018
Father's Education	0.029	0.008	0.026	0.008	0.004	0.008	0.039	0.011	0.038	0.010	-0.007	0.012
Family Income	0.005	0.003	0.002	0.002	0.003	0.002	0.001	0.003	0.008	0.003	0.004	0.003
Intercept	0.934	8.509	-2.934	6.003	-0.496	6.318	-0.002	8.369	2.148	8.951	2.262	8.992
Urban	0.144	0.084	0.129	0.064	0.087	0.068	0.155	0.090	0.139	0.091	0.064	0.097
South	0.037	0.074	0.044	0.061	0.038	0.064	-0.153	0.085	0.008	0.081	-0.128	0.093
West	-0.046	0.108	-0.074	0.076	-0.114	0.079	0.015	0.105	-0.248	0.115	-0.152	0.113
Northeast	0.056	0.082	0.093	0.065	0.039	0.069	-0.113	0.091	0.082	0.088	-0.067	0.100
Age	-0.184	0.807	0.236	0.571	0.053	0.602	-0.045	0.797	-0.251	0.847	-0.292	0.857
Age^2	0.005	0.019	-0.005	0.014	-0.001	0.014	0.002	0.019	0.006	0.020	0.008	0.020
Cognitive	1.146	0.102	0.496	0.046	0.503	0.050	0.649	0.065	1.167	0.075	0.594	0.068
Socio-emotional	—	—	—	—	—	—	—	—	—	—	—	—
Std. Error	0.288	0.049	0.417	0.016	0.445	0.016	0.596	0.022	0.376	0.023	0.671	0.024
N	422		422		422		422		422		422	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed to zero.

Table 7: Early Outcomes: Estimates for "Early Risky Behaviors"

Variable	Tried Marijuana[a]		Daily Smoking[a]		Regular Drinking[a]		Intercourse[a]		Violent in 1979[b]			
									<12 yrs school		≥12 yrs school	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Black	-0.327	0.100	-0.331	0.112	-0.242	0.108	0.600	0.099	-0.253	0.125	0.154	0.157
Hispanic	-0.152	0.124	-0.504	0.150	-0.009	0.130	-0.033	0.140	-0.316	0.161	-0.054	0.204
Broken Home	0.444	0.072	0.411	0.081	0.243	0.077	0.366	0.080	0.220	0.094	0.130	0.116
Number of Siblings	0.024	0.014	0.035	0.015	0.027	0.015	0.011	0.016	0.009	0.018	0.013	0.021
Mother's Education	0.007	0.015	-0.020	0.017	-0.001	0.016	-0.022	0.017	0.030	0.019	-0.033	0.023
Father's Education	-0.007	0.011	-0.037	0.013	-0.003	0.012	-0.027	0.013	-0.034	0.015	0.009	0.016
Family Income	0.000	0.003	-0.002	0.003	-0.001	0.003	-0.003	0.003	-0.006	0.004	-0.006	0.003
Intercept	-0.770	0.185	-0.487	0.213	-1.059	0.198	-0.860	0.216	-3.223	3.597	15.948	10.354
Urban	0.258	0.072	0.116	0.081	0.095	0.077	0.212	0.087	0.131	0.093	0.012	0.104
South	-0.103	0.066	-0.027	0.075	0.066	0.071	0.104	0.076	-0.204	0.098	0.050	0.113
West									-0.125	0.117	0.149	0.132
Northeast									-0.184	0.120	0.053	0.122
Age									0.517	0.384	-1.434	0.990
Age^2									-0.017	0.010	0.033	0.024
College Attendance											-0.132	0.124
Cognitive	-0.113	0.048	-0.210	0.054	-0.142	0.051	-0.281	0.057	-0.160	0.062	-0.233	0.073
Socioemotional	-0.604	0.059	-0.526	0.064	-0.287	0.061	-0.401	0.066	-0.497	0.078	-0.262	0.090
N	2239		2176		2231		2218		1272		909	

Notes: The numbers in this table represent the estimated coefficients and standard errors associated with binary outcome models for the early risky behaviors on the set of controls presented in rows. Information about living in the West and Northeast is only available in 1979. a) The dependent variable takes a value of one if the individual has reported the behavior before age 15, and zero otherwise. b) The variable "Violent" takes a value of one if the individual participated in fighting or assault in 1979, and is estimated separately by education level to account for age differences in 1979.

C.2 Models for Labor Market Outcomes

Table 8: Outcome Model: Estimates for (Log) Wages at Age 30 by Schooling Level

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.211	0.032	-0.198	0.068	-0.268	0.091	-0.228	0.053	-0.240	0.081	-0.065	0.079
Hispanic	-0.044	0.041	-0.175	0.077	-0.054	0.146	-0.008	0.065	-0.127	0.103	-0.000	0.109
Broken Home	-0.012	0.023	-0.020	0.047	0.126	0.075	0.060	0.038	-0.085	0.059	-0.067	0.056
Number of Siblings	-0.006	0.004	-0.005	0.009	0.005	0.014	-0.006	0.007	0.009	0.011	0.007	0.010
Mother's Education	0.014	0.005	0.006	0.011	0.008	0.018	-0.000	0.008	0.016	0.012	0.013	0.009
Father's Education	0.012	0.003	0.007	0.009	0.016	0.012	0.010	0.006	-0.005	0.009	0.006	0.007
Family Income	0.007	0.001	0.008	0.003	0.007	0.004	0.008	0.002	0.008	0.002	0.005	0.001
Intercept	2.121	0.066	2.098	0.163	1.920	0.279	2.250	0.116	2.335	0.188	2.295	0.143
Local Unemployment	-0.626	0.439	-0.951	1.093	0.992	1.467	-0.191	0.699	-1.305	1.099	-0.778	0.925
Northeast	0.145	0.027	0.288	0.073	0.097	0.118	0.079	0.041	0.135	0.070	0.182	0.049
South	-0.013	0.024	0.082	0.058	0.002	0.090	-0.050	0.039	0.019	0.062	-0.023	0.049
West	0.030	0.028	0.054	0.076	0.011	0.110	0.044	0.045	0.069	0.066	-0.004	0.056
Urban	0.118	0.023	0.055	0.054	0.103	0.085	0.091	0.034	0.124	0.060	0.139	0.056
Cognitive	0.201	0.015	0.097	0.052	0.156	0.061	0.155	0.025	0.047	0.042	0.235	0.042
Socio-emotional	0.052	0.018	-0.061	0.053	0.068	0.074	-0.050	0.030	0.033	0.051	0.057	0.045
Std. Error	0.401	0.006	0.325	0.015	0.436	0.023	0.389	0.010	0.412	0.016	0.387	0.013
N	1991		235		183		757		340		476	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of (log) wages on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 9: Outcome Model: Labor Market Participation at Age 30 by Schooling Level

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.498	0.126	-1.283	0.309	-0.249	0.301	-0.581	0.265	-0.108	0.390		
Hispanic	-0.037	0.190	-0.302	0.360	-0.167	0.499	0.124	0.457				
Broken Home	-0.240	0.103	-0.004	0.241	-0.473	0.261	-0.113	0.213	-0.169	0.300	-0.486	0.320
Number of Siblings	-0.012	0.020	-0.016	0.044	0.087	0.056	0.032	0.043	-0.053	0.055	-0.007	0.071
Mother's Education	-0.007	0.023	0.028	0.053	0.010	0.063	-0.010	0.046	0.034	0.064	-0.111	0.064
Father's Education	-0.007	0.017	0.016	0.045	0.015	0.049	0.002	0.037	-0.030	0.046	-0.005	0.048
Family Income	0.016	0.005	0.028	0.017	0.025	0.016	0.026	0.012	0.002	0.012	0.014	0.010
Intercept	1.833	0.330	1.152	0.815	0.756	0.998	1.733	0.667	2.447	0.977	2.696	0.953
Local Unemployment	-4.638	2.134	-8.773	5.046	3.477	5.626	-6.626	4.134	-6.875	6.113	-2.801	6.166
Northeast	0.160	0.143	-0.166	0.367	-0.292	0.438	1.019	0.425	0.214	0.365	0.158	0.322
South	0.120	0.119	0.402	0.299	-0.117	0.351	0.188	0.225	0.155	0.313	0.271	0.335
West	-0.095	0.135	-0.679	0.346	-1.036	0.392	0.263	0.286	0.380	0.351	0.754	0.517
Urban	0.129	0.110	0.872	0.265	-0.263	0.338	0.024	0.202	-0.313	0.342	0.321	0.330
Cognitive	0.426	0.073	0.734	0.291	0.622	0.229	0.389	0.150	0.187	0.216	0.549	0.251
Socio-emotional	0.043	0.086	-0.201	0.278	-0.248	0.293	-0.167	0.172	-0.174	0.261	0.263	0.347
N	2132		278		214		791		357		492	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary choice models of labor market participation on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 10: Outcome Model: White Collar Employment (Age 30)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.266	0.115	-0.653	0.399	-0.417	0.333	-0.359	0.196	-0.286	0.258	-0.193	0.331
Hispanic	0.505	0.145	-0.547	0.421			0.458	0.221	0.458	0.328	0.674	0.562
Broken Home	0.049	0.081	0.220	0.245	0.040	0.250	0.126	0.133	-0.013	0.186	0.144	0.264
Number of Siblings	-0.038	0.016	-0.007	0.049	-0.078	0.056	-0.017	0.025	-0.021	0.036	-0.009	0.046
Mother's Education	0.072	0.017	0.026	0.062	0.067	0.060	0.039	0.029	0.033	0.039	0.048	0.046
Father's Education	0.068	0.012	0.010	0.053	0.014	0.043	0.056	0.021	0.015	0.027	0.067	0.034
Family Income	0.011	0.003	-0.011	0.014	0.004	0.013	0.006	0.006	-0.002	0.007	0.024	0.007
Intercept	-2.198	0.240	-2.169	0.857	-1.282	0.958	-1.931	0.417	-0.495	0.597	-1.641	0.683
Local Unemployment	-1.449	1.544	9.060	5.367	-3.751	5.545	-0.069	2.464	-4.399	3.442	-2.474	4.339
Northeast	0.238	0.093	1.070	0.410	-0.366	0.396	0.141	0.144	0.197	0.218	0.162	0.233
South	0.206	0.084	0.463	0.344	-0.375	0.297	0.338	0.135	-0.013	0.195	0.229	0.230
West	-0.074	0.097	0.995	0.403	-0.529	0.359	-0.008	0.158	-0.168	0.209	-0.230	0.255
Urban	0.297	0.081	-0.284	0.298	0.669	0.321	0.157	0.120	0.320	0.190	0.250	0.240
Cognitive	0.667	0.054	0.432	0.264	0.579	0.211	0.328	0.088	0.263	0.132	0.771	0.180
Socio-emotional	0.359	0.062	-0.339	0.283	-0.179	0.234	0.090	0.106	0.176	0.162	0.725	0.211
N	1953		226		177		746		333		471	

Notes: White-collar occupations are (i) professional, technical, and kindred; (ii) managers, officials, and proprietors; (iii) sales workers; (iv) farmers and farm managers; and (v) clerical and kindred. The numbers in this table represents the estimated coefficients and standard errors associated with binary model for whether or not the individual works in a white-collar occupation at age 30 on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 11: Outcome Model: Estimates for (Log) Present Value of Wages by Schooling Level

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.364	0.038	-0.751	0.089	-0.345	0.114	-0.343	0.060	-0.318	0.091	-0.115	0.101
Hispanic	0.040	0.051	-0.159	0.113	-0.101	0.192	0.199	0.080	-0.322	0.108	0.295	0.136
Broken Home	-0.119	0.028	-0.080	0.065	-0.056	0.096	-0.045	0.044	-0.122	0.066	-0.113	0.070
Number of Siblings	-0.014	0.005	-0.035	0.012	0.029	0.018	-0.005	0.008	-0.005	0.013	-0.004	0.013
Mother's Education	0.031	0.006	0.026	0.015	0.030	0.022	0.019	0.010	0.013	0.013	0.035	0.012
Father's Education	0.016	0.004	0.015	0.012	0.019	0.016	0.019	0.007	-0.009	0.010	0.004	0.009
Family Income	0.011	0.001	0.018	0.004	0.018	0.005	0.012	0.002	0.008	0.002	0.008	0.002
Intercept	11.556	0.073	11.549	0.191	11.124	0.318	11.644	0.122	12.132	0.193	11.813	0.168
Urban	0.083	0.027	0.220	0.070	0.044	0.112	0.043	0.039	0.175	0.062	0.059	0.060
South	0.039	0.029	0.071	0.076	0.160	0.116	0.024	0.045	0.032	0.068	0.029	0.058
West	-0.038	0.036	-0.153	0.102	-0.137	0.137	-0.027	0.052	0.116	0.076	-0.141	0.078
Northeast	0.107	0.032	0.159	0.097	-0.019	0.147	0.037	0.048	0.100	0.075	0.159	0.058
Cognitive	0.277	0.018	0.431	0.072	0.410	0.075	0.179	0.029	0.077	0.046	0.230	0.053
Socio-emotional	0.086	0.022	0.014	0.077	0.009	0.093	-0.088	0.035	-0.012	0.055	0.136	0.057
Std. Error	0.496	0.008	0.454	0.021	0.584	0.030	0.448	0.012	0.457	0.018	0.465	0.016
N	1986		254		204		744		333		451	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of (log) wages on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

C.3 Models for Physical Health and Behaviors

Table 12: Outcome Model: Daily Smoking (Age 30)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.006	0.106	-0.141	0.274	-0.060	0.267	0.216	0.180	-0.319	0.285	-0.051	0.357
Hispanic	-0.597	0.146	-0.972	0.349	-1.331	0.470	-0.282	0.244	-0.388	0.340	0.546	0.427
Broken Home	0.245	0.077	0.305	0.207	-0.232	0.220	0.041	0.128	0.610	0.198	-0.027	0.253
Number of Siblings	0.031	0.015	0.113	0.042	-0.026	0.045	-0.004	0.025	0.055	0.037	-0.017	0.042
Mother's Education	-0.037	0.016	0.009	0.046	-0.075	0.054	0.019	0.028	0.033	0.042	-0.076	0.040
Father's Education	0.012	0.012	0.045	0.039	0.027	0.037	0.045	0.021	0.009	0.029	0.075	0.032
Family Income	-0.007	0.003	0.011	0.013	-0.004	0.012	-0.009	0.005	0.005	0.007	-0.004	0.005
Intercept	-0.012	0.202	-1.011	0.595	1.270	0.760	-0.884	0.364	-1.271	0.589	-1.069	0.602
Northeast	-0.123	0.093	0.057	0.325	-0.346	0.355	0.125	0.139	-0.267	0.239	-0.195	0.215
South	0.018	0.080	0.057	0.246	-0.463	0.279	0.116	0.129	-0.112	0.207	0.014	0.198
West	-0.060	0.095	-0.303	0.301	-0.045	0.326	-0.213	0.155	0.033	0.216	-0.397	0.264
Urban	0.035	0.077	-0.080	0.224	0.107	0.255	0.045	0.112	0.116	0.196	0.418	0.283
Cognitive	-0.338	0.050	-0.339	0.226	-0.356	0.180	-0.028	0.083	-0.058	0.134	-0.247	0.180
Socio-emotional	-0.470	0.061	-0.484	0.233	-0.180	0.216	-0.135	0.103	-0.144	0.164	-0.387	0.195
N	1882		236		191		708		315		432	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary models for daily smoking (age 30) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 13: Outcome Model: Heavy Drinking (Age 30)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.346	0.122	-0.504	0.285	0.121	0.311	-0.380	0.206	-0.745	0.405	-0.492	0.419
Hispanic	-0.045	0.149	0.351	0.319	0.058	0.575	-0.026	0.250	-0.684	0.424	-0.139	0.505
Broken Home	0.099	0.084	0.243	0.207	0.019	0.267	0.158	0.142	-0.199	0.237	0.198	0.234
Number of Siblings	0.012	0.016	0.003	0.040	0.112	0.054	-0.009	0.027	0.009	0.048	-0.041	0.042
Mother's Education	-0.003	0.018	0.060	0.048	0.137	0.067	0.007	0.032	-0.022	0.049	-0.078	0.041
Father's Education	0.010	0.013	-0.065	0.040	0.022	0.045	0.024	0.024	0.019	0.033	0.047	0.031
Family Income	-0.003	0.003	0.011	0.013	-0.000	0.016	-0.006	0.006	-0.008	0.008	-0.003	0.005
Intercept	-0.861	0.219	-1.102	0.594	-3.165	0.983	-0.928	0.400	-0.458	0.690	-0.015	0.599
Northeast	-0.027	0.099	0.119	0.313	0.711	0.430	-0.056	0.157	-0.092	0.263	-0.217	0.212
South	-0.060	0.088	-0.066	0.256	0.642	0.342	-0.090	0.144	-0.191	0.239	0.017	0.201
West	-0.066	0.104	-0.145	0.321	0.208	0.390	-0.227	0.176	0.200	0.244	-0.054	0.244
Urban	0.164	0.085	0.643	0.250	-0.003	0.303	0.188	0.127	0.118	0.218	-0.038	0.235
Cognitive	-0.020	0.056	0.120	0.232	0.166	0.217	0.103	0.095	0.088	0.156	-0.234	0.176
Socio-emotional	-0.245	0.067	0.197	0.233	0.430	0.255	-0.225	0.115	-0.520	0.201	-0.562	0.189
N	1723		216		165		654		292		396	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary models of daily smoking (age 30) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 14: Outcome Model: Obesity (Age 40)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	0.136	0.104	0.143	0.267	0.375	0.285	-0.059	0.178	0.495	0.282	0.756	0.293
Hispanic	0.288	0.137	0.527	0.320	1.006	0.520	-0.060	0.232	0.747	0.344	-0.027	0.449
Broken Home	0.011	0.079	0.202	0.203	-0.014	0.251	-0.010	0.134	-0.126	0.207	0.146	0.214
Number of Siblings	-0.014	0.015	-0.014	0.039	-0.111	0.051	0.014	0.025	-0.037	0.044	0.032	0.038
Mother's Education	-0.006	0.016	-0.058	0.046	0.006	0.056	0.000	0.029	0.038	0.042	-0.024	0.038
Father's Education	-0.016	0.012	-0.025	0.038	-0.037	0.040	0.011	0.021	-0.002	0.031	-0.028	0.029
Family Income	-0.000	0.003	0.002	0.013	0.006	0.015	0.002	0.006	-0.009	0.008	0.000	0.005
Intercept	-0.222	0.201	0.431	0.590	-0.067	0.769	-0.627	0.367	-0.589	0.610	-0.312	0.538
Northeast	0.009	0.096	-0.496	0.328	0.554	0.357	0.157	0.153	0.042	0.246	-0.160	0.201
South	0.002	0.082	-0.011	0.258	-0.130	0.290	0.064	0.132	0.012	0.210	-0.059	0.186
West	-0.140	0.101	-0.769	0.356	-0.115	0.339	0.177	0.164	-0.392	0.246	-0.098	0.230
Urban	0.040	0.070	-0.237	0.220	0.155	0.236	0.001	0.110	0.136	0.171	0.312	0.186
Cognitive	-0.139	0.051	-0.150	0.237	0.118	0.196	-0.168	0.086	-0.081	0.143	-0.158	0.165
Socio-emotional	0.018	0.062	0.148	0.228	0.164	0.239	0.115	0.104	-0.351	0.176	0.004	0.181
N	1729		223		170		649		293		394	

Notes: Obesity has been more precisely defined as a BMI of 30 and above. The numbers in this table represents the estimated coefficients and standard errors associated with binary models of obesity (age 40) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 15: Outcome Model: Physical Health at Age 40 (PCS-12)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.042	0.067	-0.280	0.219	0.219	0.207	0.066	0.111	-0.257	0.179	-0.167	0.108
Hispanic	0.119	0.088	0.129	0.278	0.531	0.339	-0.054	0.141	0.112	0.213	0.185	0.139
Broken Home	-0.054	0.050	-0.117	0.168	0.252	0.175	-0.033	0.082	0.010	0.125	-0.020	0.072
Number of Siblings	-0.022	0.009	-0.052	0.032	0.021	0.033	-0.018	0.015	-0.045	0.025	0.012	0.013
Mother's Education	0.030	0.010	0.006	0.038	0.028	0.040	0.031	0.018	0.022	0.026	0.024	0.012
Father's Education	0.008	0.008	0.034	0.031	0.006	0.028	0.006	0.013	-0.016	0.018	-0.009	0.009
Family Income	0.003	0.002	0.005	0.010	0.012	0.009	-0.002	0.003	0.007	0.004	0.002	0.002
Intercept	-0.351	0.126	-0.358	0.497	-1.024	0.561	-0.213	0.226	-0.055	0.363	0.136	0.173
Northeast	-0.007	0.060	-0.124	0.259	0.035	0.269	-0.015	0.093	0.100	0.153	-0.034	0.065
South	0.009	0.051	0.009	0.210	0.178	0.209	-0.025	0.080	0.085	0.130	-0.056	0.060
West	-0.094	0.061	-0.230	0.259	-0.238	0.243	-0.123	0.098	0.073	0.144	-0.002	0.072
Urban	0.011	0.044	0.076	0.180	-0.022	0.168	-0.028	0.067	0.055	0.104	-0.049	0.057
Cognitive	0.162	0.032	0.241	0.185	0.268	0.136	0.068	0.053	0.060	0.087	0.032	0.053
Socio-emotional	0.078	0.040	-0.154	0.193	-0.224	0.155	0.024	0.067	0.097	0.103	0.041	0.056
Std. Error	0.864	0.014	1.172	0.053	1.038	0.053	0.830	0.022	0.847	0.034	0.482	0.016
N	1932		247		196		730		321		438	

Notes: The PCS-12 scale is the Physical Component Summary (measures physical health) obtained from SF-12. SF-12 is a 12-question health survey designed by John Ware of the New England Medical Center Hospital (Ware, Kosinski, and Keller, 1996). The MCS-12 is designed to provide a measure of the respondent's mental and physical health irrespective of their proclivity to use formal health services. Respondents with a score above (below) 50 have better (worse) health than the typical person in the general U.S. population. Each one-point difference above or below 50 corresponds to a one-tenth of a standard deviation. For example, a person with a score of 30 is two standard deviations away from the mean. We standardized the SF-12 score to have mean zero and variance one in the overall population.

C.4 Models for Mental Health Outcomes

Table 16: Outcome Model: Mental Health at Age 40 (MCS-12)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	0.048	0.071	-0.210	0.219	0.428	0.209	-0.004	0.109	-0.195	0.170	0.314	0.174
Hispanic	0.092	0.092	0.465	0.278	-0.176	0.341	0.053	0.139	0.160	0.203	-0.154	0.223
Broken Home	-0.170	0.052	-0.154	0.168	0.160	0.176	-0.213	0.081	-0.252	0.119	-0.148	0.117
Number of Siblings	-0.007	0.010	-0.070	0.032	0.048	0.033	0.000	0.015	0.018	0.024	0.008	0.021
Mother's Education	0.008	0.011	0.004	0.038	-0.022	0.041	0.006	0.018	0.044	0.024	-0.002	0.019
Father's Education	-0.006	0.008	0.003	0.031	0.040	0.028	-0.000	0.013	-0.031	0.017	-0.018	0.015
Family Income	0.001	0.002	0.008	0.010	0.002	0.009	0.000	0.003	0.001	0.004	-0.001	0.002
Intercept	0.227	0.132	0.444	0.497	-0.575	0.565	0.229	0.222	0.035	0.348	0.570	0.279
Northeast	0.012	0.063	-0.237	0.259	0.138	0.272	-0.015	0.092	0.301	0.147	0.011	0.104
South	-0.059	0.053	-0.153	0.211	0.075	0.210	-0.063	0.079	0.189	0.124	-0.045	0.097
West	-0.066	0.064	-0.272	0.259	0.077	0.245	-0.123	0.097	0.222	0.137	-0.158	0.116
Urban	-0.062	0.046	0.103	0.180	-0.143	0.169	-0.034	0.066	-0.197	0.099	-0.089	0.091
Cognitive	0.072	0.034	0.236	0.185	0.158	0.137	0.065	0.052	-0.030	0.082	-0.053	0.087
Socio-emotional	0.088	0.042	0.321	0.203	-0.254	0.175	0.010	0.063	0.163	0.104	0.138	0.095
Std. Error	0.906	0.015	1.167	0.055	1.045	0.054	0.818	0.021	0.807	0.032	0.775	0.026
N	1932		247		196		730		321		438	

Notes: The MCS-12 scale is the Mental Component Summary (measures mental health) obtained from SF-12. SF-12 is a 12-question health survey designed by John Ware of the New England Medical Center Hospital (Ware, Kosinski, and Keller, 1996). The MCS-12 is designed to provide a measure of the respondent's mental and physical health irrespective of their proclivity to use formal health services. Respondents with a score above (below) 50 have better (worse) health than the typical person in the general U.S. population. Each one-point difference above or below 50 corresponds to a one-tenth of a standard deviation. For example, a person with a score of 30 is two standard deviations away from the mean. We standardized the SF-12 score to have mean zero and variance one in the overall population.

Table 17: Outcome Model: The Center for Epidemiologic Studies Depression Scale (CES-D) (Age 40)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	-0.094	0.069	-0.253	0.226	0.204	0.199	-0.087	0.114	-0.716	0.148	0.161	0.144
Hispanic	0.032	0.091	0.093	0.290	0.218	0.325	0.043	0.147	-0.272	0.176	0.038	0.184
Broken Home	-0.159	0.051	-0.231	0.173	0.302	0.168	-0.169	0.084	-0.196	0.103	-0.053	0.096
Number of Siblings	-0.024	0.010	-0.085	0.033	0.014	0.031	-0.024	0.016	0.004	0.021	0.020	0.017
Mother's Education	0.025	0.011	0.038	0.040	0.033	0.038	0.009	0.018	0.036	0.021	0.003	0.016
Father's Education	0.007	0.008	-0.030	0.032	0.047	0.027	0.017	0.014	-0.039	0.015	0.006	0.012
Family Income	0.001	0.002	0.014	0.011	0.012	0.009	-0.007	0.004	0.002	0.004	-0.000	0.002
Intercept	-0.056	0.130	0.381	0.516	-1.070	0.534	0.216	0.233	0.377	0.302	0.224	0.231
Northeast	-0.055	0.062	0.012	0.266	0.036	0.260	-0.182	0.096	0.045	0.128	0.040	0.086
South	-0.116	0.052	-0.372	0.219	-0.064	0.200	-0.142	0.083	0.150	0.108	-0.040	0.080
West	-0.190	0.063	-0.726	0.272	-0.363	0.232	-0.222	0.102	0.121	0.119	-0.048	0.096
Urban	-0.020	0.045	0.091	0.186	-0.252	0.161	-0.000	0.069	-0.141	0.086	0.011	0.076
Cognitive	0.230	0.033	0.501	0.196	0.194	0.129	0.154	0.054	0.158	0.072	-0.050	0.072
Socio-emotional	0.016	0.042	-0.044	0.222	-0.218	0.169	-0.044	0.067	-0.046	0.087	0.020	0.076
Std. Error	0.887	0.014	1.201	0.055	0.998	0.051	0.853	0.022	0.701	0.028	0.642	0.022
N	1922		242		197		726		320		437	

Notes: CES-D is one of the most common screening tests for helping an individual to determine his or her depression quotient. This scale measures symptoms of depression, discriminates between clinically depressed individuals and others, and is highly correlated with other depression rating scales (see Radloff, 1977; Ross and Mirowsky, 1989). We form the scale summing the scores from the items: "I did not feel like eating; my appetite was poor", "I had trouble keeping my mind on what I was doing", "I felt depressed", "I felt that everything I did was an effort", "My sleep was restless", "I felt sad" and "I could not get *going*". For each items the potential answers are: "0 Rarely/None of the time/1 Day", "1 Some/A little of the time/1-2 Days", "2 Occasionally/Moderate amount of the time/3-4 Days", "3 Most/All of the time/5-7 Days". We standardized the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the models of CES-D for the set of controls presented in rows. Each column contains the results obtained for a particular schooling level. The CES-D index is scaled so larger numbers are beneficial outcomes (less depression).

Table 18: Outcome Model: Pearlin's "Personal Mastery Scale"

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	0.004	0.069	0.080	0.155	0.018	0.169	-0.113	0.121	-0.096	0.191	0.182	0.180
Hispanic	0.085	0.091	0.229	0.189	0.320	0.284	0.023	0.153	-0.214	0.229	-0.098	0.252
Broken Home	-0.029	0.052	-0.061	0.118	-0.011	0.144	0.065	0.089	-0.128	0.138	0.069	0.128
Number of Siblings	-0.016	0.010	-0.021	0.022	0.009	0.028	-0.010	0.016	-0.012	0.027	0.001	0.023
Mother's Education	0.028	0.011	0.055	0.027	0.077	0.035	0.004	0.019	-0.003	0.028	0.019	0.021
Father's Education	0.018	0.008	0.005	0.023	0.034	0.024	0.017	0.014	0.004	0.020	-0.009	0.016
Family Income	0.004	0.002	0.003	0.008	0.014	0.007	0.002	0.004	-0.000	0.005	0.003	0.003
Intercept	-0.562	0.131	-0.918	0.355	-1.148	0.484	-0.371	0.242	0.222	0.406	0.286	0.308
Northeast	0.112	0.061	-0.105	0.187	0.275	0.220	0.178	0.097	0.120	0.162	-0.036	0.114
South	0.002	0.053	-0.029	0.140	-0.158	0.171	0.039	0.090	0.021	0.143	-0.012	0.108
West	0.050	0.063	0.040	0.179	-0.266	0.197	0.086	0.104	0.141	0.154	-0.010	0.129
Urban	0.033	0.051	-0.025	0.129	-0.127	0.160	0.085	0.078	0.054	0.137	-0.086	0.128
Cognitive	0.288	0.033	0.227	0.129	0.420	0.112	0.298	0.057	0.086	0.096	-0.063	0.094
Socio-emotional	0.092	0.040	-0.125	0.136	0.255	0.136	0.042	0.068	-0.012	0.114	0.044	0.106
Std. Error	0.943	0.015	0.879	0.038	0.903	0.045	0.928	0.023	0.989	0.037	0.912	0.029
N	2130		277		217		790		359		487	

Notes: Pearlins "Personal Mastery Scale" consists of 7 items which are answered on a 4-point (4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree) scale and has been shown to exhibit reasonable internal reliability and good construct validity (Pearlin and Schooler, 1978; Pearlin, Menaghan, Lieberman, and Mullan, 1981). The items are "there is really no way i can solve some of the problems i have", "sometimes i feel that i'm being pushed around in life" , "i have little control over the things that happen to me", "i can do just about anything i really set my mind to", "i often feel helpless in dealing with the problems of life", "what happens to me in the future mostly depends on me", "there is little i can do to change many of the important things in my life". We form the scale summing the scores from the items, and standardizing the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the models for the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 19: Outcome Model: Rosenberg's Self-Esteem Scale

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Black	0.025	0.077	-0.062	0.191	0.343	0.215	-0.146	0.122	0.201	0.202	0.191	0.213
Hispanic	0.118	0.104	0.056	0.235	-0.166	0.387	0.082	0.168	0.405	0.246	-0.089	0.298
Broken Home	0.011	0.058	0.046	0.145	0.236	0.185	0.059	0.092	0.120	0.148	-0.190	0.143
Number of Siblings	-0.024	0.011	-0.021	0.028	-0.056	0.035	-0.021	0.017	0.020	0.031	-0.020	0.026
Mother's Education	0.032	0.012	0.037	0.034	-0.037	0.041	0.034	0.021	0.042	0.029	0.024	0.025
Father's Education	0.014	0.009	0.028	0.027	0.010	0.029	0.012	0.015	-0.006	0.021	-0.005	0.019
Family Income	-0.000	0.002	0.001	0.009	0.010	0.011	0.003	0.004	0.002	0.005	-0.007	0.003
Intercept	-0.459	0.146	-0.496	0.422	0.384	0.588	-0.554	0.257	-0.406	0.430	0.287	0.360
Northeast	0.182	0.069	0.060	0.234	0.300	0.270	0.037	0.106	0.193	0.177	0.371	0.131
South	0.094	0.059	-0.056	0.186	-0.050	0.215	0.103	0.090	0.007	0.151	0.236	0.123
West	0.195	0.072	0.232	0.223	-0.082	0.247	0.129	0.115	0.044	0.169	0.446	0.149
Urban	-0.073	0.051	-0.141	0.158	-0.377	0.175	-0.053	0.076	-0.064	0.121	-0.101	0.116
Cognitive	0.349	0.037	0.561	0.163	0.435	0.141	0.391	0.060	0.072	0.101	0.050	0.111
Socio-emotional	0.078	0.045	-0.048	0.165	-0.025	0.184	0.037	0.072	0.243	0.123	-0.073	0.121
Std. Error	0.936	0.016	0.939	0.047	0.972	0.055	0.884	0.025	0.929	0.039	0.921	0.033
N	1694		210		162		648		286		388	

Notes: Rosenberg's Self-Esteem Scale consists of 11 items which are answered on a 4-point (4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree). The items are "I feel that I'm a person of worth, at least on equal basis with others", "I feel that I have a number of good qualities" , "All in all, I am inclined to feel that I am a failure", "I am able to do things as well as most other people", "I feel I do not have much to be proud of", "I take a positive attitude toward myself", "On the whole, I am satisfied with myself", "I wish I could have more respect for myself" , "I certainly feel useless at times", "At times I think I am no good at all". We form the scale summing the scores from the items, and standardizing the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

C.5 Significance of Cognitive and Non-cognitive Factors within Schooling Levels

Table 20: Estimated Factor Loadings on Cognitive and Socioemotional Factors by Outcome and Schooling Level

			By Schooling Level											
Variables	All (Not conditioning on schooling)		HSDropout		GED		HS Grad.		Some Coll.		Coll. Grad.		Tests	
	β	Std Err	β	Std Err	β	Std Err	β	Std Err	β	Std Err	β	Std Err	p-val$^{(a)}$	p-val$^{(b)}$
Log Wages														
Cognitive	0.201	0.015	0.097	0.052	0.156	0.061	0.155	0.025	0.047	0.042	0.235	0.042	0.000	0.001
Socioemotional	0.052	0.018	-0.061	0.053	0.068	0.074	-0.050	0.030	0.033	0.051	0.057	0.045	0.221	0.006
Smoking (Age 30)														
Cognitive	-0.338	0.050	-0.339	0.226	-0.356	0.180	-0.028	0.083	-0.058	0.134	-0.247	0.180	0.133	0.002
Socioemotional	-0.470	0.061	-0.484	0.233	-0.180	0.216	-0.135	0.103	-0.144	0.164	-0.387	0.195	0.037	0.007
Physical Health (Age 40)														
Cognitive	0.162	0.032	0.241	0.185	0.268	0.136	0.068	0.053	0.060	0.087	0.032	0.053	0.155	0.047
Socioemotional	0.078	0.040	-0.154	0.193	-0.224	0.155	0.024	0.067	0.097	0.103	0.041	0.056	0.513	0.275
Self-Esteem														
Cognitive	0.349	0.037	0.561	0.163	0.435	0.141	0.391	0.060	0.072	0.101	0.050	0.111	0.000	0.004
Socioemotional	0.078	0.045	-0.048	0.165	-0.025	0.184	0.037	0.072	0.243	0.123	-0.073	0.121	0.465	0.469
White Collar (Age 30)														
Cognitive	0.667	0.054	0.432	0.264	0.579	0.211	0.328	0.088	0.263	0.132	0.771	0.180	0.000	0.000
Socioemotional	0.359	0.062	-0.339	0.283	-0.179	0.234	0.090	0.106	0.176	0.162	0.725	0.211	0.004	0.000
PV Wages														
Cognitive	0.277	0.018	0.431	0.072	0.410	0.075	0.179	0.029	0.077	0.046	0.230	0.053	0.000	0.000
Socioemotional	0.086	0.022	0.014	0.077	0.009	0.093	-0.088	0.035	-0.012	0.055	0.136	0.057	0.033	0.000
LF Participation														
Cognitive	0.426	0.073	0.734	0.291	0.622	0.229	0.389	0.150	0.187	0.216	0.549	0.251	0.000	0.629
Socioemotional	0.043	0.086	-0.201	0.278	-0.248	0.293	-0.167	0.172	-0.174	0.261	0.263	0.347	0.666	0.493
Obese														
Cognitive	-0.139	0.051	-0.150	0.237	0.118	0.196	-0.168	0.086	-0.081	0.143	-0.158	0.165	0.323	0.847
Socioemotional	0.018	0.062	0.148	0.228	0.164	0.239	0.115	0.104	-0.351	0.176	0.004	0.181	0.285	0.295
Depression														
Cognitive	0.230	0.033	0.501	0.196	0.194	0.129	0.154	0.054	0.158	0.072	-0.050	0.072	0.001	0.001
Socioemotional	0.016	0.042	-0.044	0.222	-0.218	0.169	-0.044	0.067	-0.046	0.087	0.020	0.076	0.785	0.661
Self-Mastery														
Cognitive	0.288	0.033	0.227	0.129	0.420	0.112	0.298	0.057	0.086	0.096	-0.063	0.094	0.000	0.001
Socioemotional	0.092	0.040	-0.125	0.136	0.255	0.136	0.042	0.068	-0.012	0.114	0.044	0.106	0.437	0.359
Mental Health														
Cognitive	0.072	0.034	0.236	0.185	0.158	0.137	0.065	0.052	-0.030	0.082	-0.053	0.087	0.412	0.441
Socioemotional	0.088	0.042	0.321	0.203	-0.254	0.175	0.010	0.063	0.163	0.104	0.138	0.095	0.105	0.197

Notes: (a) shows the p-value from a likelihood ratio test against the null hypothesis that the factor loadings for the conditional models are jointly equal to zero. (b) shows the p-value from a likelihood ratio test against the null hypothesis that the factor loadings for the conditional models are jointly equal to the factor loading of the unconditional model.

D Variance Decompositions

The variance of the latent endowments is split up into its components: $var(\alpha_C\theta_C + \alpha_{SE}\theta_{SE}) = \alpha_C^2\sigma_{\theta_C}^2 + 2 * \alpha_C\alpha_{SE}cov(\theta_C, \theta_{SE}) + \alpha_{SE}^2\sigma_{\theta_{SE}}^2$. These are represented in the table as Cognitive ($\alpha_C^2\sigma_{\theta_C}^2$), Covariance ($2 * \alpha_C\alpha_{SE}cov(\theta_C, \theta_{SE})$), and Socioemotional ($\alpha_{SE}^2\sigma_{\theta_{SE}}^2$). For discrete variables, the decomposition is for the index.

Table 21: Variance decomposition of educational decisions and grades

	Observables	Cognitive	Covariance	Socioemotional	Unobservables
$D_{0,1}$: Graduate HS	0.25	0.12	0.07	0.16	0.40
$D_{0,2}$: GED	0.17	0.26	0.02	0.01	0.55
$D_{1,3}$: Enroll College	0.27	0.16	0.04	0.05	0.48
$D_{3,4}$: 4-year College Degree	0.24	0.16	0.05	0.07	0.49
GPA Language	0.08	0.10	0.10	0.43	0.29
GPA Social Sciences	0.09	0.12	0.10	0.37	0.32
GPA Science	0.10	0.12	0.10	0.37	0.31
GPA Math	0.04	0.09	0.08	0.29	0.49

Notes: Columns show the fraction of the variance in each outcome explained by observable covariates (X), unobservable cognitive and socioemotional factors (θ_C, θ_{SE}), and remaining unobservables (ϵ). For continuous outcomes we decompose the observed variance, while for discrete outcomes we decompose the variance of the latent index. Given the assumption that the factors, observable characteristic, and unobservables are all independent, the total variance of an outcome can be decomposed as $var(Y) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for continuous outcomes and $var(I) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for discrete outcomes. Furthermore, $var(\boldsymbol{\alpha}'\boldsymbol{\theta}) = var(\theta_C\alpha_C) + 2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE}) + var(\theta_{SE}\alpha_{SE})$. In the legend above, for continuous outcomes, "Observables" is $var(\mathbf{X}'\boldsymbol{\beta})/var(Y)$, "Cognitive" is $var(\theta_C\alpha_C)/var(Y)$, "Covariance" is $2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE})/var(Y)$, and "Socioemotional" is $var(\theta_{SE}\alpha_{SE})/var(Y)$. Calculations for the discrete outcomes are the same, but are normalizes by $var(I)$ rather than $var(Y)$.

Table 22: Variance decomposition of ASVAB tests

	Observables	Cognitive	Covariance	Socioemotional	Unobservables
Arithmetic Reasoning (< 12)	0.25	0.52	-	-	0.23
Word Knowledge (< 12)	0.32	0.38	-	-	0.30
Paragraph Comprehension (< 12)	0.26	0.45	-	-	0.29
Numerical Operations (< 12)	0.18	0.40	-	-	0.42
Math Knowledge (< 12)	0.25	0.50	-	-	0.25
Coding Speed (< 12)	0.18	0.33	-	-	0.49
Arithmetic Reasoning ($= 12$)	0.23	0.56	-	-	0.21
Word Knowledge ($= 12$)	0.32	0.36	-	-	0.32
Paragraph Comprehension ($= 12$)	0.23	0.43	-	-	0.34
Numerical Operations ($= 12$)	0.19	0.39	-	-	0.42
Math Knowledge ($= 12$)	0.23	0.53	-	-	0.24
Coding Speed ($= 12$)	0.18	0.30	-	-	0.51
Arithmetic Reasoning (> 12)	0.21	0.69	-	-	0.09
Word Knowledge (> 12)	0.27	0.29	-	-	0.44
Paragraph Comprehension (> 12)	0.15	0.32	-	-	0.54
Numerical Operations (> 12)	0.19	0.29	-	-	0.53
Math Knowledge (> 12)	0.20	0.66	-	-	0.15
Coding Speed (> 12)	0.16	0.22	-	-	0.62

Notes: Columns show the fraction of the variance in each outcome explained by observable covariates (X), unobservable cognitive and socioemotional factors (θ_C, θ_{SE}), and remaining unobservables (ϵ). For continuous outcomes we decompose the observed variance, while for discrete outcomes we decompose the variance of the latent index. Given the assumption that the factors, observable characteristic, and unobservables are all independent, the total variance of an outcome can be decomposed as $var(Y) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for continuous outcomes and $var(I) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for discrete outcomes. Furthermore, $var(\boldsymbol{\alpha}'\boldsymbol{\theta}) = var(\theta_C\alpha_C) + 2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE}) + var(\theta_{SE}\alpha_{SE})$. In the legend above, for continuous outcomes, "Observables" is $var(\mathbf{X}'\boldsymbol{\beta})/var(Y)$, "Cognitive" is $var(\theta_C\alpha_C)/var(Y)$, "Covariance" is $2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE})/var(Y)$, and "Socioemotional" is $var(\theta_{SE}\alpha_{SE})/var(Y)$. Calculations for the discrete outcomes are the same, but are normalizes by $var(I)$ rather than $var(Y)$.

Table 23: Variance decomposition of early reckless and adverse behaviors

	Observables	Cognitive	Covariance	Socioemotional	Unobservables
Early Violence (9th-11th)[b]	0.11	0.01	0.01	0.08	0.79
Early Violence (12h)[b]	0.15	0.02	0.01	0.02	0.79
Early Reckless (9th-11th)[b]	0.05	-	-	0.03	0.92
Early Reckless (12th)[b]	0.12	-	-	0.02	0.86
Early marijuana[c]	0.05	0.00	0.01	0.13	0.81
Early daily smoking[c]	0.06	0.02	0.02	0.09	0.81
Early drinking[c]	0.02	0.01	0.01	0.03	0.93
Early intercourse[c]	0.11	0.03	0.02	0.05	0.79

Notes: Columns show the fraction of the variance in each outcome explained by observable covariates (X), unobservable cognitive and socioemotional factors (θ_C, θ_{SE}), and remaining unobservables (ϵ). For continuous outcomes we decompose the observed variance, while for discrete outcomes we decompose the variance of the latent index. Given the assumption that the factors, observable characteristic, and unobservables are all independent, the total variance of an outcome can be decomposed as $var(Y) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for continuous outcomes and $var(I) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for discrete outcomes. Furthermore, $var(\boldsymbol{\alpha}'\boldsymbol{\theta}) = var(\theta_C\alpha_C) + 2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE}) + var(\theta_{SE}\alpha_{SE})$. In the legend above, for continuous outcomes, "Observables" is $var(\mathbf{X}'\boldsymbol{\beta})/var(Y)$, "Cognitive" is $var(\theta_C\alpha_C)/var(Y)$, "Covariance" is $2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE})/var(Y)$, and "Socioemotional" is $var(\theta_{SE}\alpha_{SE})/var(Y)$. Calculations for the discrete outcomes are the same, but are normalizes by $var(I)$ rather than $var(Y)$.

Table 24: Variance decomposition of labor market outcomes

	Observables	Cognitive	Covariance	Socioemotional	Unobservables
Log Wages (30)	0.18	0.08	0.01	0.01	0.72
High school dropouts	0.20	0.02	0.01	0.01	0.77
GED Recipients	0.17	0.05	0.01	0.01	0.76
High school graduates	0.15	0.05	0.01	0.01	0.78
Some college	0.18	0.01	0.00	0.00	0.81
Four-year college graduate	0.11	0.12	0.01	0.01	0.75
PVLog Wages (30)	0.25	0.09	0.01	0.01	0.64
High school dropouts	0.40	0.15	0.01	0.00	0.43
GED Recipients	0.25	0.18	0.02	0.00	0.55
High school graduates	0.22	0.04	0.01	0.01	0.72
Some college	0.16	0.01	0.00	0.00	0.82
Four-year college graduate	0.14	0.07	0.01	0.02	0.75
LF Participation	0.10	0.07	0.00	0.00	0.82
High school dropouts	0.33	0.13	-0.02	0.01	0.54
GED Recipients	0.25	0.11	-0.02	0.02	0.64
High school graduates	0.24	0.05	-0.01	0.01	0.72
Some college	0.08	0.01	-0.01	0.01	0.90
Four-year college graduate	0.15	0.10	0.02	0.02	0.71
White Collar Employment	0.17	0.13	0.03	0.03	0.63
High school dropouts	0.21	0.06	-0.02	0.03	0.71
GED Recipients	0.19	0.11	-0.02	0.01	0.71
High school graduates	0.11	0.04	0.01	0.00	0.84
Some college	0.07	0.03	0.01	0.01	0.89
Four-year college graduate	0.16	0.14	0.06	0.12	0.52

Notes: Columns show the fraction of the variance in each outcome explained by observable covariates (X), unobservable cognitive and socioemotional factors (θ_C, θ_{SE}), and remaining unobservables (ϵ). For continuous outcomes we decompose the observed variance, while for discrete outcomes we decompose the variance of the latent index. Given the assumption that the factors, observable characteristic, and unobservables are all independent, the total variance of an outcome can be decomposed as $var(Y) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for continuous outcomes and $var(I) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for discrete outcomes. Furthermore, $var(\boldsymbol{\alpha}'\boldsymbol{\theta}) = var(\theta_C\alpha_C) + 2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE}) + var(\theta_{SE}\alpha_{SE})$. In the legend above, for continuous outcomes, "Observables" is $var(\mathbf{X}'\boldsymbol{\beta})/var(Y)$, "Cognitive" is $var(\theta_C\alpha_C)/var(Y)$, "Covariance" is $2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE})/var(Y)$, and "Socioemotional" is $var(\theta_{SE}\alpha_{SE})/var(Y)$. Calculations for the discrete outcomes are the same, but are normalizes by $var(I)$ rather than $var(Y)$.

Table 25: Variance decomposition of physical health outcomes

	Observables	Cognitive	Covariance	Socioemotional	Unobservables
SF12 Physical Health	0.03	0.02	0.00	0.00	0.95
High school dropouts	0.09	0.03	0.00	0.01	0.86
GED Recipients	0.07	0.04	0.01	0.02	0.86
High school graduates	0.02	0.00	0.00	0.00	0.98
Some college	0.05	0.00	0.00	0.01	0.94
Four-year college graduate	0.01	0.00	0.00	0.00	0.99
Obesity	0.02	0.01	-0.00	0.00	0.98
High school dropouts	0.17	0.01	-0.00	0.01	0.82
GED Recipients	0.16	0.01	0.00	0.01	0.83
High school graduates	0.01	0.01	-0.00	0.01	0.98
Some college	0.07	0.00	0.01	0.05	0.87
Four-year college graduate	0.13	0.01	-0.00	0.00	0.86
Smoking Age 30	0.05	0.04	0.03	0.08	0.81
High school dropouts	0.13	0.04	0.03	0.07	0.73
GED Recipients	0.13	0.05	0.01	0.01	0.80
High school graduates	0.06	0.00	0.00	0.01	0.93
Some college	0.10	0.00	0.00	0.01	0.89
Four-year college graduate	0.09	0.02	0.02	0.05	0.82
Heavy Drinking Age 30	0.02	0.00	0.00	0.02	0.96
High school dropouts	0.13	0.01	0.00	0.01	0.84
GED Recipients	0.17	0.01	0.01	0.06	0.75
High school graduates	0.04	0.00	-0.00	0.02	0.94
Some college	0.09	0.00	-0.01	0.09	0.82
Four-year college graduate	0.05	0.02	0.02	0.11	0.80

Notes: Columns show the fraction of the variance in each outcome explained by observable covariates (X), unobservable cognitive and socioemotional factors (θ_C, θ_{SE}), and remaining unobservables (ϵ). For continuous outcomes we decompose the observed variance, while for discrete outcomes we decompose the variance of the latent index. Given the assumption that the factors, observable characteristic, and unobservables are all independent, the total variance of an outcome can be decomposed as $var(Y) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for continuous outcomes and $var(I) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for discrete outcomes. Furthermore, $var(\boldsymbol{\alpha}'\boldsymbol{\theta}) = var(\theta_C\alpha_C) + 2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE}) + var(\theta_{SE}\alpha_{SE})$. In the legend above, for continuous outcomes, "Observables" is $var(\mathbf{X}'\boldsymbol{\beta})/var(Y)$, "Cognitive" is $var(\theta_C\alpha_C)/var(Y)$, "Covariance" is $2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE})/var(Y)$, and "Socioemotional" is $var(\theta_{SE}\alpha_{SE})/var(Y)$. Calculations for the discrete outcomes are the same, but are normalizes by $var(I)$ rather than $var(Y)$.

Table 26: Variance decomposition of mental health outcomes

	Observables	Cognitive	Covariance	Socioemotional	Unobservables
SF12 Mental Health	0.01	0.00	0.00	0.00	0.98
High school dropouts	0.09	0.03	0.00	0.04	0.84
GED Recipients	0.06	0.01	0.00	0.03	0.90
High school graduates	0.01	0.00	0.00	0.00	0.98
Some college	0.05	0.00	-0.00	0.01	0.93
Four-year college graduate	0.03	0.00	-0.00	0.01	0.96
CESD Depression	0.04	0.03	0.00	0.00	0.93
High school dropouts	0.20	0.10	0.00	0.00	0.70
GED Recipients	0.12	0.02	0.00	0.02	0.84
High school graduates	0.03	0.01	0.00	0.00	0.96
Some college	0.10	0.01	0.00	0.00	0.89
Four-year college graduate	0.01	0.00	-0.00	0.00	0.99
Pearlin Self Mastery	0.03	0.04	0.01	0.00	0.92
High school dropouts	0.04	0.02	0.00	0.01	0.92
GED Recipients	0.15	0.07	0.01	0.02	0.75
High school graduates	0.02	0.04	0.01	0.00	0.93
Some college	0.01	0.00	0.00	0.00	0.98
Four-year college graduate	0.01	0.00	-0.00	0.00	0.99
Rosenberg Self-Esteem	0.03	0.06	0.01	0.00	0.91
High school dropouts	0.05	0.13	0.01	0.00	0.81
GED Recipients	0.09	0.08	0.01	0.00	0.83
High school graduates	0.03	0.07	0.01	0.00	0.89
Some college	0.03	0.00	0.00	0.03	0.94
Four-year college graduate	0.05	0.00	0.00	0.00	0.95

Notes: Columns show the fraction of the variance in each outcome explained by observable covariates (X), unobservable cognitive and socioemotional factors (θ_C, θ_{SE}), and remaining unobservables (ϵ). For continuous outcomes we decompose the observed variance, while for discrete outcomes we decompose the variance of the latent index. Given the assumption that the factors, observable characteristic, and unobservables are all independent, the total variance of an outcome can be decomposed as $var(Y) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for continuous outcomes and $var(I) = var(\mathbf{X}'\boldsymbol{\beta}) + var(\boldsymbol{\theta}'\boldsymbol{\alpha}) + var(\epsilon)$ for discrete outcomes. Furthermore, $var(\boldsymbol{\alpha}'\boldsymbol{\theta}) = var(\theta_C\alpha_C) + 2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE}) + var(\theta_{SE}\alpha_{SE})$. In the legend above, for continuous outcomes, "Observables" is $var(\mathbf{X}'\boldsymbol{\beta})/var(Y)$, "Cognitive" is $var(\theta_C\alpha_C)/var(Y)$, "Covariance" is $2cov(\theta_C\alpha_C, \theta_{SE}\alpha_{SE})/var(Y)$, and "Socioemotional" is $var(\theta_{SE}\alpha_{SE})/var(Y)$. Calculations for the discrete outcomes are the same, but are normalizes by $var(I)$ rather than $var(Y)$.

E Goodness of Fit

Table 27: Goodness of Fit - Schooling Choice

Schooling Level	Data	Model	p-value
High School Dropout	0.13	0.12	0.24
GED (No College)	0.10	0.10	0.84
High School Graduate	0.37	0.38	0.50
Some College	0.17	0.18	0.31
College Graduate	0.23	0.22	0.38

Notes: The simulated data (Model) contains one million observations generated from the model estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males. (a) Goodness of fit is tested using a χ^2 test that the two proportions are equal, where the Null Hypothesis is *Model=Data*.

Table 28: Goodness of Fit - Early Risky and Reckless Behavior

Outcome	Actual	Model	p-value[a]
Early marijuana[c]	0.34	0.34	0.94
Early daily smoking[c]	0.19	0.19	0.99
Early drinking[c]	0.19	0.19	1.00
Early intercourse[c]	0.16	0.16	0.68
Early Violence (9th-11th)[b]	0.67	0.65	0.18
Early Violence (12h)[b]	0.50	0.52	0.19
Early Reckless (9th-11th)[b]	0.61	0.60	0.61
Early Reckless (12th)[b]	0.53	0.54	0.65

Notes: The simulated data (Model) contains one million observations generated from the model estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males. (a) (a) Goodness of fit is tested using a χ^2 test that the two proportions are equal, where the Null Hypothesis is that the model fits the data. (b) The reckless and violent variables are taken from the NSLY 1980 Illegal Activities Supplement. (c) Early is defined as engaging in risky behavior before 15 years old.

Table 29: Goodness of Fit - ASVAB and Grade models

	Mean		Std Dev		
	Data	Model	Data	Model	p-value
ASVAB Tests					
Arithmetic Reasoning (< 12)	-0.29	-0.36	0.93	0.90	0.03
Word Knowledge (< 12)	-0.45	-0.53	1.08	1.06	0.01
Paragraph Comprehension (< 12)	-0.51	-0.59	1.18	1.17	0.02
Numerical Operations (< 12)	-0.52	-0.58	0.96	0.93	0.06
Math Knowledge (< 12)	-0.32	-0.39	0.89	0.83	0.01
Coding Speed (< 12)	-0.60	-0.65	0.78	0.77	0.07
Arithmetic Reasoning ($= 12$)	0.20	0.19	0.86	0.83	0.73
Word Knowledge ($= 12$)	0.13	0.13	0.78	0.74	0.86
Paragraph Comprehension ($= 12$)	0.04	0.03	0.80	0.75	0.73
Numerical Operations ($= 12$)	-0.01	-0.02	0.89	0.85	0.81
Math Knowledge ($= 12$)	0.00	-0.02	0.81	0.75	0.45
Coding Speed ($= 12$)	-0.16	-0.17	0.77	0.75	0.92
Arithmetic Reasoning (> 12)	0.94	0.91	0.67	0.64	0.35
Word Knowledge (> 12)	0.74	0.75	0.33	0.31	0.80
Paragraph Comprehension (> 12)	0.64	0.62	0.32	0.32	0.63
Numerical Operations (> 12)	0.58	0.56	0.59	0.57	0.51
Math Knowledge (> 12)	0.97	0.95	0.74	0.72	0.52
Coding Speed (> 12)	0.47	0.46	0.65	0.63	0.67
9th Grade GPA					
GPA Language	-0.12	-0.18	0.98	0.99	0.01
GPA Social Sciences	-0.01	-0.07	0.99	1.00	0.02
GPA Science	0.03	-0.02	0.98	0.97	0.08
GPA Math	-0.01	-0.05	0.99	0.99	0.08

Notes: The simulated data (Model) contains one million observations generated from the Model's estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males.The numbers inside the parentheses describe the years of schooling at the time of the test. The ASVAB models are estimated separately for those with less than twelve years (< 12), those who are high school graduates ($=12$), and those who have attended college (> 12) at the time they took the ASVAB tests. (a) The p-values reported are from a T-test for the equivalence of the means where the null hypothesis is that $Actual = Model$

Table 30: Goodness of Fit - Discrete Labor Outcomes

Outcome	Actual	Model	p-value[a]
LF Participation	0.92	0.93	0.01
High school dropouts	0.83	0.82	0.74
GED Recipients	0.84	0.85	0.68
High school graduates	0.94	0.96	0.04
Some college	0.94	0.95	0.18
Four-year college graduate	0.96	0.96	0.71
White Collar Employment	0.44	0.44	0.87
High school dropouts	0.15	0.15	0.80
GED Recipients	0.24	0.23	0.76
High school graduates	0.28	0.27	0.64
Some college	0.48	0.49	0.81
Four-year college graduate	0.87	0.88	0.36

Notes: The simulated data (Model) contains one million observations generated from the Model's estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males. (a) Goodness of fit is tested using a χ^2 test that the two proportions are equal, where the Null Hypothesis is *Model=Data*.

Table 31: Goodness of Fit - Discrete Health Outcomes

Outcome	Actual	Model	p-value[a]
Obesity	0.32	0.32	0.72
High school dropouts	0.30	0.35	0.24
GED Recipients	0.29	0.28	0.56
High school graduates	0.37	0.37	0.88
Some college	0.35	0.35	0.63
Four-year college graduate	0.22	0.21	0.35
Smoking Age 30	0.38	0.39	0.66
High school dropouts	0.67	0.65	0.38
GED Recipients	0.63	0.62	0.62
High school graduates	0.39	0.39	0.64
Some college	0.34	0.34	0.68
Four-year college graduate	0.15	0.17	0.29
Heavy Drinking Age 30	0.23	0.23	0.91
High school dropouts	0.27	0.27	0.83
GED recipients	0.23	0.24	0.60
High school graduates	0.25	0.25	0.82
Some college	0.24	0.24	0.78
Four-year college graduate	0.18	0.20	0.43

Notes: The simulated data (Model) contains one million observations generated from the Model's estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males. (a) Goodness of fit is tested using a χ^2 test that the two proportions are equal, where the Null Hypothesis is that the model predictions fits the data.

Table 32: Goodness of Fit - Health Outcomes

	Mean		Std Dev		
	Actual	Model	Actual	Model	p-value
SF12 Physical Health	0.07	0.07	0.79	0.79	0.94
High school dropouts	-0.29	-0.37	1.46	1.45	0.30
GED Recipients	-0.17	-0.16	1.17	1.17	0.89
High school graduates	0.05	0.05	0.70	0.70	0.96
Some college	0.13	0.15	0.75	0.75	0.70
Four-year college graduate	0.36	0.37	0.24	0.24	0.71
SF12 Mental Health	0.14	0.14	0.84	0.84	0.98
High school dropouts	-0.10	-0.14	1.47	1.47	0.60
GED Recipients	0.02	0.03	1.20	1.22	0.84
High school graduates	0.19	0.21	0.68	0.69	0.64
Some college	0.23	0.23	0.70	0.71	0.91
Four-year college graduate	0.18	0.15	0.63	0.63	0.36
CESD Depression	0.13	0.12	0.85	0.84	0.86
High school dropouts	-0.36	-0.46	1.67	1.67	0.23
GED Recipients	-0.02	-0.06	1.11	1.11	0.62
High school graduates	0.13	0.14	0.76	0.75	0.79
Some college	0.24	0.24	0.58	0.56	0.91
Four-year college graduate	0.38	0.39	0.42	0.42	0.64
Pearlin Self Mastery	0.05	0.05	0.97	0.97	0.95
High school dropouts	-0.46	-0.53	0.82	0.81	0.21
GED Recipients	-0.04	-0.08	0.96	0.92	0.53
High school graduates	-0.04	-0.05	0.91	0.91	0.89
Some college	0.24	0.25	1.00	0.99	0.86
Four-year college graduate	0.40	0.41	0.84	0.84	0.75
Rosenberg Self-Esteem	0.06	0.05	0.97	0.97	0.72
High school dropouts	-0.32	-0.36	0.98	1.01	0.57
GED Recipients	-0.12	-0.12	1.08	1.10	0.99
High school graduates	-0.06	-0.07	0.86	0.85	0.84
Some college	0.24	0.24	0.91	0.90	0.98
Four-year college graduate	0.40	0.39	0.90	0.90	0.71

Notes: The simulated data (Model) contains one million observations generated from the Model's estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males. (a) The p-values reported are from a T-test for the equivalence of the means where the null hypothesis is that the model predictions fits the data.

Table 33: Goodness of Fit - Continuous Labor Market Outcomes

	Mean		Std Dev		
	Actual	Model	Actual	Model	p-value
Log Wages (30)	2.61	2.60	0.23	0.22	0.47
High school dropouts	2.29	2.24	0.13	0.13	0.05
GED Recipients	2.43	2.41	0.23	0.23	0.69
High school graduates	2.53	2.53	0.18	0.18	0.75
Some college	2.67	2.68	0.21	0.20	0.64
Four-year college graduate	2.93	2.95	0.19	0.19	0.38
PVLog Wages (30)	12.32	12.31	0.40	0.39	0.76
High school dropouts	11.79	11.68	0.37	0.39	0.01
GED Recipients	11.95	11.95	0.46	0.43	0.95
High school graduates	12.27	12.27	0.27	0.26	1.00
Some college	12.42	12.43	0.26	0.26	0.81
Four-year college graduate	12.76	12.81	0.27	0.27	0.04

Notes: The simulated data (Model) contains one million observations generated from the Model's estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males. (a) The p-values reported are from a T-test for the equivalence of the means where the null hypothesis is that the model predictions fits the data.

Goodness of Fit by Subpopulation

Table 34: Goodness of Fit by Subpopulation – Binary Measures

Subpopulation	**Blacks**			**Southern**			**Above Avg AFQT**			**Mother without HS Diploma**		
	Actual	Model	p-value	Actual	Model	p-value	Actual	Model	p-value	Actual	Model	p-value
High School Dropout	0.20	0.20	0.85	0.18	0.17	0.35	0.04	0.09	0.00	0.26	0.22	0.01
GED (No College)	0.16	0.14	0.39	0.14	0.13	0.80	0.07	0.09	0.02	0.16	0.14	0.33
High School Graduate	0.38	0.35	0.32	0.34	0.34	0.93	0.32	0.36	0.00	0.40	0.40	0.83
Some College	0.15	0.17	0.25	0.16	0.17	0.82	0.20	0.19	0.19	0.11	0.14	0.03
College Graduate	0.12	0.15	0.15	0.18	0.20	0.41	0.37	0.28	0.00	0.07	0.10	0.00
Early marijuana^c	0.31	0.29	0.71	0.31	0.30	0.78	0.32	0.34	0.07	0.36	0.34	0.25
Early daily smoking^c	0.19	0.18	0.77	0.19	0.19	0.76	0.15	0.17	0.03	0.25	0.23	0.12
Early drinking^c	0.18	0.17	0.77	0.20	0.20	0.83	0.17	0.18	0.15	0.22	0.20	0.15
Early intercourse^c	0.38	0.37	0.73	0.21	0.20	0.69	0.10	0.13	0.01	0.26	0.22	0.01
Early Violence (9th-11th)^b	0.65	0.61	0.40	0.65	0.61	0.18	0.64	0.66	0.42	0.68	0.62	0.00
Early Violence (12th)^b	0.59	0.61	0.64	0.52	0.54	0.49	0.43	0.51	0.00	0.52	0.58	0.07
Early Reckless (9th-11th)^b	0.63	0.62	0.73	0.55	0.54	0.61	0.63	0.62	0.54	0.59	0.57	0.46
Early Reckless (12th)^b	0.48	0.49	0.81	0.49	0.48	0.74	0.54	0.55	0.61	0.50	0.54	0.21

Notes: The simulated data (Model) contains one million observations generated from the model estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males.
((a) Goodness of fit is tested using a χ^2 test that the p-model fits the data for the indicated subpopulations, where the Null Hypothesis is *Model=Data*. (b) The reckless and violent variables are taken from the NSLY 1980 Illegal Activities Supplement. (c) Early is defined as engaging in risky behavior before 15 years old.

Table 35: Goodness of Fit by Subpopulation – Binary Outcomes

Subpopulation	**Blacks**			**Southern**			**Above Avg AFQT**			**Mother without HS Diploma**		
	Actual	Model	p-value	Actual	Model	p-value	Actual	Model	p-value	Actual	Model	p-value
Participation	0.83	0.85	0.41	0.91	0.93	0.08	0.95	0.95	0.27	0.89	0.92	0.01
High school dropouts	0.66	0.59	0.28	0.85	0.85	0.87	0.91	0.84	0.09	0.82	0.81	0.87
GED recipients	0.80	0.82	0.77	0.87	0.89	0.50	0.92	0.82	0.00	0.86	0.86	0.96
High school graduates	0.88	0.89	0.75	0.93	0.94	0.55	0.96	0.96	0.98	0.93	0.96	0.06
Some college	0.90	0.94	0.39	0.94	0.95	0.51	0.95	0.95	0.77	0.90	0.94	0.20
Four-year college graduate	0.94	0.92	0.77	0.94	0.96	0.36	0.96	0.96	0.92	0.98	0.99	0.60
White Collar	0.27	0.31	0.27	0.39	0.40	0.67	0.58	0.49	0.00	0.28	0.31	0.09
High school dropouts	0.09	0.08	0.86	0.14	0.13	0.75	0.22	0.17	0.38	0.13	0.14	0.61
GED recipients	0.14	0.14	0.94	0.21	0.19	0.78	0.34	0.27	0.18	0.19	0.20	0.80
High school graduates	0.17	0.19	0.76	0.29	0.29	0.86	0.34	0.28	0.02	0.25	0.24	0.88
Some college	0.37	0.39	0.85	0.46	0.46	1.00	0.53	0.50	0.30	0.47	0.47	0.99
Four-year college graduate	0.83	0.84	0.90	0.85	0.89	0.16	0.89	0.88	0.53	0.80	0.88	0.15
Obese	0.37	0.37	0.97	0.34	0.34	0.97	0.29	0.31	0.23	0.35	0.35	1.00
High school dropouts	0.28	0.31	0.63	0.40	0.42	0.62	0.23	0.31	0.23	0.34	0.37	0.35
GED recipients	0.31	0.31	0.99	0.22	0.25	0.53	0.30	0.26	0.48	0.33	0.28	0.38
High school graduates	0.35	0.35	0.98	0.37	0.36	0.73	0.35	0.38	0.37	0.36	0.36	0.99
Some college	0.52	0.51	0.97	0.38	0.40	0.73	0.33	0.35	0.46	0.34	0.34	0.98
Four-year college graduate	0.52	0.48	0.66	0.25	0.20	0.28	0.21	0.20	0.55	0.36	0.28	0.32
Smoking	0.47	0.46	0.67	0.42	0.42	0.79	0.32	0.37	0.00	0.47	0.43	0.08
High school dropouts	0.68	0.70	0.78	0.65	0.66	0.82	0.67	0.71	0.56	0.65	0.64	0.69
GED recipients	0.62	0.59	0.70	0.56	0.56	0.95	0.62	0.67	0.33	0.63	0.61	0.68
High school graduates	0.50	0.49	0.93	0.40	0.42	0.74	0.40	0.39	0.60	0.38	0.37	0.70
Some college	0.30	0.29	0.94	0.34	0.31	0.49	0.33	0.35	0.68	0.27	0.27	0.92
Four-year college graduate	0.11	0.13	0.81	0.19	0.19	0.94	0.14	0.16	0.14	0.20	0.22	0.73
Heavy Drinker	0.17	0.17	0.84	0.22	0.21	0.65	0.23	0.24	0.42	0.22	0.23	0.79
High school dropouts	0.17	0.18	0.96	0.20	0.23	0.44	0.31	0.25	0.46	0.28	0.27	0.75
GED recipients	0.32	0.36	0.66	0.30	0.29	0.73	0.26	0.20	0.31	0.18	0.22	0.38
High school graduates	0.17	0.16	0.84	0.23	0.21	0.56	0.27	0.26	0.81	0.22	0.23	0.81
Some college	0.07	0.07	0.99	0.17	0.18	0.81	0.24	0.25	0.66	0.16	0.19	0.60
Four-year college graduate	0.09	0.10	0.86	0.21	0.22	0.83	0.17	0.20	0.22	0.22	0.24	0.82

Notes: The simulated data (Model) contains one million observations generated from the model estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males.

(a) Goodness of fit is tested using a χ^2 test that the two proportions are equal, where the Null Hypothesis is *Model=Data*.

Table 36: Goodness of Fit by Subpopulation – Grades I

Subpopulation	**Blacks**					**Southern**				
	Mean		Std-Dev.			Mean		Std-Dev.		
	Data	Model	Data	Model	p-value	Data	Model	Data	Model	p-value
GPA Language	-0.57	-0.57	0.90	0.97	1.00	-0.22	-0.24	0.99	1.00	0.70
GPA Soc Sciences	-0.48	-0.48	0.89	0.98	1.00	-0.13	-0.15	1.13	1.03	0.62
GPA Science	-0.56	-0.52	0.95	0.92	0.65	-0.10	-0.12	1.04	0.97	0.73
GPA Math	-0.40	-0.39	0.97	0.97	0.93	-0.12	-0.13	1.00	0.99	0.81

Notes: The simulated data (Model) contains one million observations generated from the model estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males.
(a) Goodness of fit is tested using a T test where the Null Hypothesis is that the means are equal.

Table 37: Goodness of Fit by Subpopulation – Grades II

Subpopulation	**Above Avg AFQT**					**Mother without HS Diploma**				
	Mean		Std-Dev.			Mean		Std-Dev.		
	Data	Model	Data	Model	p-value	Data	Model	Data	Model	p-value
GPA Language	0.19	-0.09	0.83	0.96	0.00	-0.44	-0.44	0.98	0.96	0.95
GPA Soc Sciences	0.31	0.01	0.80	0.98	0.00	-0.31	-0.33	1.03	0.98	0.67
GPA Science	0.34	0.08	0.79	0.92	0.00	-0.34	-0.30	1.00	0.92	0.36
GPA Math	0.26	0.02	0.88	0.97	0.00	-0.26	-0.23	1.07	0.97	0.49

Notes: The simulated data (Model) contains one million observations generated from the model estimates. The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males.
(a) Goodness of fit is tested using a T test where the Null Hypothesis is that the means are equal.

Table 38: Goodness of Fit by Subpopulation – Continuous Outcomes I

Subpopulation	**Blacks**					**Southern**				
	Mean		Std-Dev.			Mean		Std-Dev.		
	Data	Model	Data	Model	p-value	Data	Model	Data	Model	p-value
Log Wages (30)	2.34	2.33	0.23	0.22	0.85	2.47	2.49	0.20	0.22	0.23
High school dropouts	2.16	2.11	0.10	0.12	0.33	2.24	2.22	0.15	0.12	0.67
GED Recipients	2.19	2.20	0.15	0.21	0.92	2.32	2.35	0.17	0.22	0.55
High school graduates	2.26	2.24	0.19	0.17	0.82	2.39	2.40	0.15	0.18	0.89
Some college	2.39	2.41	0.18	0.19	0.75	2.59	2.61	0.18	0.20	0.65
Four-year college graduate	2.90	2.90	0.26	0.19	1.00	2.82	2.89	0.19	0.18	0.09
PVLog Wages (30)	11.80	11.83	0.54	0.34	0.55	12.16	12.19	0.38	0.41	0.25
High school dropouts	11.26	11.10	0.55	0.30	0.17	11.70	11.65	0.38	0.40	0.40
GED Recipients	11.65	11.71	0.68	0.40	0.64	11.99	12.02	0.38	0.41	0.73
High school graduates	11.81	11.81	0.37	0.23	0.96	12.14	12.15	0.26	0.28	0.69
Some college	12.07	12.08	0.22	0.24	0.84	12.34	12.34	0.30	0.26	0.90
Four-year college graduate	12.56	12.62	0.12	0.26	0.44	12.66	12.79	0.22	0.28	0.00
SF12 Physical Health	-0.08	-0.06	1.03	0.79	0.77	0.01	0.03	0.80	0.80	0.48
High school dropouts	-0.52	-0.63	1.84	1.48	0.56	-0.33	-0.37	1.35	1.43	0.75
GED Recipients	-0.00	0.06	1.06	1.15	0.73	-0.10	-0.05	1.05	1.16	0.70
High school graduates	0.06	0.08	0.58	0.69	0.87	0.05	0.04	0.61	0.71	0.98
Some college	-0.13	-0.08	1.30	0.75	0.81	0.11	0.13	0.71	0.75	0.81
Four-year college graduate	0.19	0.19	0.28	0.23	0.98	0.26	0.34	0.31	0.24	0.14
SF12 Mental Health	0.10	0.11	1.24	0.84	0.85	0.12	0.12	0.97	0.84	0.91
High school dropouts	-0.33	-0.43	2.18	1.38	0.65	-0.15	-0.16	1.66	1.46	0.94
GED Recipients	0.38	0.47	0.48	1.18	0.44	0.06	0.04	0.96	1.25	0.87
High school graduates	0.11	0.14	1.22	0.70	0.79	0.19	0.18	0.72	0.68	0.81
Some college	0.05	0.05	1.22	0.70	0.97	0.17	0.23	0.90	0.71	0.55
Four-year college graduate	0.52	0.44	0.18	0.61	0.39	0.21	0.13	0.79	0.62	0.37
CESD Depression	-0.10	-0.08	1.26	0.83	0.77	0.04	0.04	1.01	0.84	0.85
High school dropouts	-0.52	-0.71	2.00	1.62	0.36	-0.51	-0.53	1.83	1.63	0.87
GED Recipients	0.09	0.08	0.72	1.13	0.91	0.01	-0.07	1.07	1.10	0.51
High school graduates	-0.02	0.00	1.28	0.73	0.85	0.10	0.08	0.81	0.75	0.79
Some college	-0.36	-0.33	0.89	0.52	0.86	0.19	0.21	0.57	0.59	0.83
Four-year college graduate	0.52	0.51	0.31	0.42	0.97	0.34	0.36	0.60	0.42	0.82
Pearlin Self Mastery	-0.08	-0.05	1.12	0.97	0.71	-0.09	-0.03	0.95	0.97	0.12
High school dropouts	-0.40	-0.51	1.29	0.83	0.50	-0.57	-0.56	0.75	0.82	0.93
GED Recipients	-0.10	-0.07	0.80	0.95	0.85	-0.18	-0.14	1.01	0.91	0.76
High school graduates	-0.18	-0.15	1.10	0.92	0.83	-0.13	-0.10	0.95	0.90	0.72
Some college	0.10	0.11	1.19	1.02	0.93	0.11	0.19	0.89	0.98	0.40
Four-year college graduate	0.58	0.60	0.71	0.86	0.91	0.33	0.42	0.76	0.84	0.27
Rosenberg Self-Esteem	-0.04	-0.00	1.05	0.97	0.64	-0.03	0.02	1.07	0.96	0.25
High school dropouts	-0.24	-0.39	1.39	1.01	0.46	-0.41	-0.41	1.01	0.99	0.99
GED Recipients	-0.04	0.04	0.88	1.12	0.65	-0.15	-0.14	1.04	1.13	0.92
High school graduates	-0.25	-0.23	0.97	0.85	0.79	-0.08	-0.07	0.93	0.86	0.82
Some college	0.41	0.43	0.73	0.94	0.91	0.15	0.23	1.14	0.91	0.51
Four-year college graduate	0.56	0.59	0.73	0.93	0.87	0.35	0.40	1.10	0.91	0.68

Notes: The simulated data (Model) contains one million observations generated from the model estimates.
The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males.
(a) Goodness of fit is tested using a T test where the Null Hypothesis is that the means are equal.

Table 39: Goodness of Fit by Subpopulation – Continuous Outcomes II

Subpopulation	**Above Avg AFQT**					**Mother without HS Diploma**				
	Mean		Std-Dev.			Mean		Std-Dev.		
	Data	Model	Data	Model	p-value	Data	Model	Data	Model	p-value
Log Wages (30)	2.74	2.67	0.21	0.22	0.00	2.44	2.46	0.20	0.21	0.30
High school dropouts	2.39	2.29	0.08	0.13	0.03	2.27	2.22	0.13	0.13	0.14
GED Recipients	2.55	2.49	0.21	0.21	0.23	2.37	2.38	0.23	0.23	0.86
High school graduates	2.60	2.55	0.18	0.17	0.02	2.46	2.48	0.18	0.18	0.48
Some college	2.71	2.70	0.19	0.19	0.80	2.56	2.56	0.18	0.20	0.93
Four-year college graduate	2.95	2.95	0.19	0.19	0.82	2.85	2.94	0.23	0.18	0.17
PVLog Wages (30)	12.53	12.43	0.27	0.36	0.00	12.02	12.08	0.42	0.36	0.02
High school dropouts	12.17	11.81	0.21	0.38	0.00	11.69	11.64	0.41	0.39	0.32
GED Recipients	12.27	12.00	0.25	0.43	0.00	11.87	11.94	0.49	0.42	0.36
High school graduates	12.37	12.32	0.20	0.24	0.04	12.12	12.16	0.33	0.27	0.22
Some college	12.49	12.46	0.22	0.24	0.36	12.27	12.30	0.26	0.26	0.55
Four-year college graduate	12.79	12.82	0.26	0.27	0.23	12.56	12.69	0.25	0.26	0.08
SF12 Physical Health	0.18	0.12	0.59	0.78	0.02	-0.14	-0.07	1.14	0.78	0.08
High school dropouts	0.01	-0.28	1.07	1.37	0.07	-0.38	-0.41	1.58	1.45	0.74
GED Recipients	-0.06	-0.27	0.82	1.13	0.06	-0.32	-0.16	1.45	1.16	0.17
High school graduates	0.03	0.07	0.79	0.70	0.48	-0.02	-0.01	0.82	0.70	0.94
Some college	0.18	0.16	0.60	0.74	0.64	0.01	0.08	0.90	0.76	0.51
Four-year college graduate	0.37	0.37	0.24	0.24	0.76	0.21	0.30	0.49	0.25	0.43
SF12 Mental Health	0.19	0.15	0.66	0.84	0.14	0.04	0.11	1.10	0.84	0.09
High school dropouts	0.03	-0.13	1.49	1.46	0.40	-0.18	-0.15	1.63	1.47	0.70
GED Recipients	0.11	-0.04	0.78	1.19	0.18	0.01	0.05	1.44	1.22	0.72
High school graduates	0.20	0.21	0.63	0.69	0.78	0.13	0.18	0.74	0.68	0.39
Some college	0.23	0.24	0.64	0.70	0.92	0.23	0.22	0.62	0.69	0.88
Four-year college graduate	0.18	0.14	0.59	0.63	0.26	0.16	0.21	0.92	0.63	0.79
CESD Depression	0.28	0.19	0.55	0.83	0.00	-0.09	-0.02	1.25	0.84	0.12
High school dropouts	0.04	-0.39	1.18	1.63	0.01	-0.49	-0.49	1.85	1.67	1.00
GED Recipients	0.11	-0.11	0.73	1.11	0.03	-0.16	-0.15	1.34	1.08	0.99
High school graduates	0.19	0.16	0.64	0.75	0.42	0.08	0.09	0.90	0.76	0.83
Some college	0.33	0.28	0.45	0.54	0.22	0.13	0.15	0.88	0.58	0.86
Four-year college graduate	0.38	0.39	0.40	0.42	0.74	0.26	0.37	0.57	0.42	0.35
Pearlin Self Mastery	0.22	0.11	0.93	0.96	0.00	-0.15	-0.10	0.91	0.96	0.22
High school dropouts	-0.30	-0.50	1.27	0.83	0.22	-0.56	-0.58	0.66	0.81	0.68
GED Recipients	0.18	-0.08	0.84	0.92	0.01	-0.13	-0.18	0.91	0.92	0.64
High school graduates	0.03	-0.03	0.90	0.90	0.16	-0.08	-0.06	0.89	0.91	0.73
Some college	0.31	0.27	0.93	0.99	0.47	0.27	0.18	1.03	1.01	0.44
Four-year college graduate	0.40	0.41	0.84	0.84	0.85	0.29	0.33	0.78	0.83	0.74
Rosenberg Self-Esteem	0.22	0.09	0.90	0.96	0.00	-0.14	-0.07	0.96	0.96	0.06
High school dropouts	-0.08	-0.29	0.82	0.98	0.17	-0.41	-0.40	0.86	1.00	0.90
GED Recipients	0.10	-0.18	0.84	1.09	0.03	-0.15	-0.11	1.09	1.15	0.70
High school graduates	0.08	-0.05	0.81	0.85	0.01	-0.18	-0.12	0.90	0.85	0.35
Some college	0.27	0.23	0.96	0.90	0.61	0.32	0.29	0.79	0.92	0.73
Four-year college graduate	0.38	0.37	0.91	0.90	0.86	0.30	0.27	1.03	0.91	0.86

Notes: The simulated data (Model) contains one million observations generated from the model estimates.
The actual data (Actual) contains 2242 observations from the NLSY79 sample of Males.
(a) Goodness of fit is tested using a T test where the Null Hypothesis is that the means are equal.

Table 40: χ^2 Test for equality of the means across sub-populations.

	p-value
Log Wages (30)	0.44
PVLog Wages (30)	0.05
SF12 Physical Health	0.58
SF12 Mental Health	0.07
CESD Depression	0.43
Pearlin Self Mastery	0.10
Rosenberg Self-Esteem	0.13
Participation	0.18
White Collar Employment	0.07
Obesity	0.66
Smoking	0.06
Heavy Drinking Age 30	0.81

Notes: This table jointly tests if the observed and simulated outcome means are equal for 16 unique sub-populations. Subpopulations are the unique groups defined by the binary variables: white, southern residence at age 14, family income greater than $20,500 in 1979, and mother's highest grade completed is less than 12. The reported p-value is for the χ^2-test against the null hypothesis that the means are equal for the observed and simulated data.

F Evaluating the Model and the Effects of Correcting for Measurement Error

F.1 Variance Decompositions when AFQT, GPA, and Risky Behavior are Included Directly

Table 41: Proportion of variance explained (correcting and not correcting for measurement error)

	Our Model	AFQT, GPA, and Risky Behavior
$D_{0,1}$: Graduate HS	0.60	0.52
$D_{0,2}$: GED	0.45	0.39
$D_{1,3}$: Enroll College	0.52	0.50
$D_{3,4}$: 4-year College Degree	0.51	0.47
Early Violence (9th-11th)[b]	0.21	0.03
Early Violence (12h)[b]	0.21	0.13
Early marijuana[c]	0.19	0.04
Early daily smoking[c]	0.19	0.06
Early drinking[c]	0.07	0.02
Early intercourse[c]	0.21	0.11
Log Wages (30)	0.28	0.26
High school dropouts	0.23	0.23
GED Recipients	0.24	0.24
High school graduates	0.22	0.16
Some college	0.19	0.20
Four-year college graduate	0.25	0.18
SF12 Physical Health	0.05	0.05
High school dropouts	0.14	0.33
GED Recipients	0.14	0.15
High school graduates	0.02	0.02
Some college	0.06	0.04
Four-year college graduate	0.01	0.02
Smoking Age 30	0.19	0.13
High school dropouts	0.27	0.27
GED Recipients	0.20	0.29
High school graduates	0.07	0.08
Some college	0.11	0.09
Four-year college graduate	0.18	0.13
Rosenberg Self-Esteem	0.09	0.08
High school dropouts	0.19	0.26
GED Recipients	0.17	0.22
High school graduates	0.11	0.08
Some college	0.06	0.04
Four-year college graduate	0.05	0.08

Notes: "Our model" shows the explained variance for each measure using the main 2-factor model laid out in the paper. "AFQT, GPA, and Risky Behavior" show the explained variance from estimating our model, but controlling for AFQT, GPA and minor risky behavior in 1979 directly, rather than estimating factors. Proportion of explained variance is calculated as $(var(\boldsymbol{X'\beta}) + var(\boldsymbol{\theta'\alpha}))/var(Y)$ for the main model, and as $(var(\tilde{X}'\tilde{\beta}))/var(Y)$ for the AFQT and GPA model, where $\tilde{X}$ includes AFQT and GPA.

Table 42: Proportion of variance explained (correcting and not correcting for measurement error – additional outcomes)

	Our Model	AFQT, GPA, and Risky Behavior
PVLog Wages (30)	0.36	0.32
High school dropouts	0.57	0.48
GED Recipients	0.45	0.38
High school graduates	0.28	0.23
Some college	0.18	0.18
Four-year college graduate	0.25	0.20
LF Participation	0.18	0.14
High school dropouts	0.46	0.43
GED Recipients	0.36	0.46
High school graduates	0.28	0.27
Some college	0.10	0.12
Four-year college graduate	0.29	0.28
White Collar Employment	0.37	0.34
High school dropouts	0.29	0.34
GED Recipients	0.29	0.30
High school graduates	0.16	0.18
Some college	0.11	0.12
Four-year college graduate	0.48	0.42
Obesity	0.02	0.02
High school dropouts	0.18	0.23
GED Recipients	0.17	0.21
High school graduates	0.02	0.03
Some college	0.13	0.11
Four-year college graduate	0.14	0.14
Heavy Drinking Age 30	0.04	0.03
High school dropouts	0.16	0.23
GED Recipients	0.25	0.19
High school graduates	0.06	0.05
Some college	0.18	0.15
Four-year college graduate	0.20	0.16
SF12 Mental Health	0.02	0.01
High school dropouts	0.16	0.18
GED Recipients	0.10	0.13
High school graduates	0.02	0.02
Some college	0.07	0.06
Four-year college graduate	0.04	0.04
CESD Depression	0.07	0.05
High school dropouts	0.30	0.32
GED Recipients	0.16	0.12
High school graduates	0.04	0.05
Some college	0.11	0.11
Four-year college graduate	0.01	0.01
Perlin Self Mastery	0.08	0.07
High school dropouts	0.08	0.10
GED Recipients	0.25	0.24
High school graduates	0.07	0.06
Some college	0.02	0.03
Four-year college graduate	0.01	0.01

Notes: "Our model" shows the explained variance for each measure using the main 2-factor model laid out in the paper. "AFQT, GPA, and Risky Behavior" show the explained variance from estimating our model, but controlling for AFQT, GPA and minor risky behavior in 1979 directly, rather than estimating factors. Proportion of explained variance is calculated as $(var(\boldsymbol{X'\beta}) + var(\boldsymbol{\theta'\alpha}))/var(Y)$ for the main model, and as $(var(\tilde{X}'\tilde{\beta}))/var(Y)$ for the AFQT and GPA model, where $\tilde{X}$ includes AFQT and GPA.

Comparing Treatment Effects

The tables in this section show estimated pairwise treatment effects using a number of different models using different covariates. The "Data-AFQT and GPA" column shows results for a model with educational dummies age-adjusted AFQT, 9th grade core GPA and our controls. The "Model-AFQT and GPA" column shows results from a model when we include no factors, but include AFQT and GPA in each outcome. The "Model-1 Factor" column shows results for a model, where we fit a one factor model that loads on the ASVAB subtests, GPA, minor risky behavior, and educational choice. The "Our Model-2 Factors" column shows results from our full model.

Table 43: ATE Comparison: Log Wages (age 30)

	Data-AFQT and GPA	Model-AFQT and GPA	Model-1 Factor	Model-2 Factors
Dropout-GED	0.07	0.09	0.05	0.10
Dropout-HS Graduate	0.14	0.14	0.09	0.13
Dropout-Some College	0.20	0.22	0.17	0.21
Dropout-College Grad	0.37	0.33	0.20	0.26

Table 44: ATE Comparison: Smoking (age 30)

	Data-AFQT and GPA	Model-AFQT and GPA	Model-1 Factor	Our Model-2 Facto
Dropout-GED	-0.08	-0.02	0.03	0.05
Dropout-HS Graduate	-0.28	-0.21	-0.17	-0.14
Dropout-Some College	-0.32	-0.26	-0.23	-0.20
Dropout-College Grad	-0.53	-0.44	-0.39	-0.35

Table 45: ATE Comparison: Physical Health (age 40)

	Data-AFQT and GPA	Model-AFQT and GPA	Model-1 Factor	Our Model-2 Facto
Dropout-GED	-0.02	-0.48	-0.20	-0.19
Dropout-HS Graduate	0.28	-0.19	-0.07	0.07
Dropout-Some College	0.27	-0.19	-0.05	0.10
Dropout-College Grad	0.45	0.01	0.17	0.31

Table 46: ATE Comparison: Self Esteem (age 40)

	Data-AFQT and GPA	Model-AFQT and GPA	Model-1 Factor	Our Model-2 Facto
Dropout-GED	0.01	-0.41	-0.28	-0.19
Dropout-HS Graduate	0.08	-0.34	-0.30	-0.14
Dropout-Some College	0.27	-0.15	-0.09	0.05
Dropout-College Grad	0.34	0.17	0.10	0.26

F.2 OLS Estimates Controlling for and Conditioning on Education.

This subsection presents OLS regression for all main outcomes we analyze in this paper. In every regression we control for AFQT, GPA, and our standard controls. In the first column we control for schooling, while in the subsequent columns we condition on schooling. All tables include control for race, broken home status, number of siblings, mother's and father's highest grade completed, family income in 1979, urban status, region, and when appropriate age and age squared. Coefficients for these control variables are not displayed in the tables below.

The first four tables show results for our whole sample, while the second four tables show results restricted to whites. Results do not appear to qualitatively differ across specifications.

The main conclusion is that, controlling for schooling, for most outcomes except smoking, we find at best weak effects of socioemotional measures on the indicated outcomes. For some outcomes, the effects of cognition remain strong.

Full Sample

Table 47: Smoking Age 30 regression (controlling for and then conditional on schooling)

	Controls	Schl Dums	DO	GED	HSG	Some Coll	Coll
AFQT	-0.0286	0.00310	-0.0768	-0.0281	0.0165	0.00510	-0.00909
	(0.0157)	(0.0161)	(0.0575)	(0.0566)	(0.0261)	(0.0398)	(0.0338)
9th Gr GPA	-0.121***	-0.0589***	-0.128**	-0.0965*	-0.0291	-0.0638	-0.0595*
	(0.0143)	(0.0154)	(0.0452)	(0.0466)	(0.0274)	(0.0398)	(0.0289)
Reckless Behav.	0.0000702*	0.0000666*	0.0000354	0.000104	0.0000316	0.000223***	-0.0000174
	(0.0000282)	(0.0000274)	(0.0000742)	(0.000116)	(0.0000460)	(0.0000627)	(0.0000583)
GED		-0.0748					
		(0.0545)					
HSG		-0.248***					
		(0.0459)					
SC		-0.294***					
		(0.0524)					
Coll		-0.487***					
		(0.0581)					
Constant	0.153	0.493	-2.746	0.0500	1.292	-2.409	1.037
	(0.976)	(0.953)	(3.298)	(3.488)	(1.638)	(2.382)	(1.522)
R^2	0.101	0.149	0.206	0.197	0.042	0.109	0.052

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 48: Physical Health regression (controlling for and then conditional on schooling)

	Controls	Schl Dums	DO	GED	HSG	Some Coll	Coll
AFQT	0.0650*	0.0466	0.430**	0.131	0.00973	-0.0364	0.0234
	(0.0281)	(0.0292)	(0.148)	(0.134)	(0.0415)	(0.0719)	(0.0491)
9th Gr GPA	0.0830**	0.0221	0.0319	0.0307	0.0212	0.146*	0.00422
	(0.0252)	(0.0279)	(0.121)	(0.112)	(0.0432)	(0.0741)	(0.0402)
Reckless Behav.	0.0000486	0.0000521	0.000308	0.000313	0.0000477	-0.0000255	-0.0000869
	(0.0000499)	(0.0000496)	(0.000194)	(0.000261)	(0.0000718)	(0.000123)	(0.0000798)
GED		0.00544					
		(0.0997)					
HSG		0.267**					
		(0.0839)					
SC		0.259**					
		(0.0953)					
Coll		0.431***					
		(0.106)					
Constant	-1.502	-1.844	-5.161	5.409	-0.473	-8.331	0.797
	(1.746)	(1.738)	(8.686)	(8.703)	(2.641)	(4.307)	(2.165)
R^2	0.049	0.063	0.153	0.072	0.017	0.076	0.048

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 49: Self Esteem regression (controlling for and then conditional on schooling)

	Controls	Schl Dums	DO	GED	HSG	Some Coll	Coll
AFQT	0.183***	0.149***	0.436**	0.446***	0.278***	-0.0830	-0.195*
	(0.0342)	(0.0358)	(0.147)	(0.121)	(0.0504)	(0.0852)	(0.0967)
9th Gr GPA	0.0922**	0.0508	0.0769	0.0755	-0.0304	0.249**	0.0593
	(0.0309)	(0.0341)	(0.111)	(0.0996)	(0.0521)	(0.0901)	(0.0797)
Reckless Behav.	-0.0000471	-0.0000457	0.000245	-0.000667**	0.0000531	-0.000209	-0.000167
	(0.0000605)	(0.0000603)	(0.000168)	(0.000232)	(0.0000891)	(0.000156)	(0.000147)
GED		0.000381					
		(0.125)					
HSG		0.0575					
		(0.103)					
SC		0.245*					
		(0.118)					
Coll		0.316*					
		(0.130)					
Constant	-1.427	-1.599	-5.691	-6.044	-1.975	-9.271	5.645
	(2.124)	(2.120)	(8.224)	(8.062)	(3.205)	(5.069)	(4.280)
R^2	0.077	0.087	0.185	0.264	0.079	0.078	0.091

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Whites Only

Table 50: Log Wage (age 30) regression (whites only – controlling for and then conditional on schooling)

	Controls	Schl Dums	DO	GED	HSG	Some Coll	Coll
AFQT	0.106***	0.0775***	0.122**	0.131*	0.0824***	-0.00117	0.120**
	(0.0146)	(0.0152)	(0.0441)	(0.0517)	(0.0223)	(0.0387)	(0.0402)
9th Gr GPA	0.0650***	0.0284*	0.0190	0.0522	-0.0113	0.0406	0.0721*
	(0.0129)	(0.0141)	(0.0353)	(0.0446)	(0.0232)	(0.0372)	(0.0320)
Reckless Behav.	-0.00000267	2.86e-08	0.0000322	-0.000175	-0.00000784	0.0000771	-0.0000122
	(0.0000270)	(0.0000266)	(0.0000915)	(0.000119)	(0.0000365)	(0.0000646)	(0.0000666)
GED		0.0374					
		(0.0542)					
HSG		0.0968*					
		(0.0453)					
SC		0.166**					
		(0.0511)					
Coll		0.304***					
		(0.0555)					
Constant	2.189*	1.820*	-1.893	-2.351	2.852*	2.561	1.886
	(0.891)	(0.880)	(2.764)	(3.347)	(1.400)	(2.193)	(1.682)
R^2	0.224	0.250	0.286	0.260	0.109	0.154	0.121

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 51: Smoking (age 30) regression (whites only – controlling for and then conditional on schooling)

	Controls	Schl Dums	DO	GED	HSG	Some Coll	Coll
AFQT	-0.0193	0.0129	-0.0833	-0.0438	0.0177	0.0189	0.0320
	(0.0174)	(0.0179)	(0.0607)	(0.0663)	(0.0286)	(0.0456)	(0.0385)
9th Gr GPA	-0.134***	-0.0700***	-0.173***	-0.0803	-0.0386	-0.0950*	-0.0678*
	(0.0157)	(0.0169)	(0.0481)	(0.0557)	(0.0304)	(0.0441)	(0.0303)
Reckless Behav.	0.0000448	0.0000476	0.0000340	-0.0000351	0.0000279	0.000223**	-0.0000641
	(0.0000324)	(0.0000315)	(0.000102)	(0.000170)	(0.0000501)	(0.0000728)	(0.0000613)
GED		-0.0726					
		(0.0622)					
HSG		-0.280***					
		(0.0523)					
SC		-0.317***					
		(0.0598)					
Coll		-0.517***					
		(0.0652)					
Constant	0.501	0.876	-4.033	1.893	2.067	-3.120	0.933
	(1.053)	(1.024)	(3.554)	(4.032)	(1.791)	(2.634)	(1.564)
R^2	0.107	0.160	0.271	0.132	0.027	0.113	0.044

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 52: Physical Health regression (whites only – controlling for and then conditional on schooling)

	Controls	Schl Dums	DO	GED	HSG	Some Coll	Coll
AFQT	0.0581	0.0439	0.484**	0.0944	-0.00757	-0.0356	0.0276
	(0.0304)	(0.0319)	(0.160)	(0.152)	(0.0457)	(0.0783)	(0.0566)
9th Gr GPA	0.0843**	0.0320	0.0901	-0.0322	0.0391	0.147	0.0107
	(0.0273)	(0.0300)	(0.133)	(0.133)	(0.0484)	(0.0783)	(0.0426)
Reckless Behav.	0.0000342	0.0000296	0.000232	0.000524	0.0000522	-0.0000255	-0.000110
	(0.0000557)	(0.0000554)	(0.000277)	(0.000413)	(0.0000775)	(0.000131)	(0.0000850)
GED		-0.166					
		(0.113)					
HSG		0.154					
		(0.0952)					
SC		0.164					
		(0.108)					
Coll		0.313**					
		(0.118)					
Constant	-0.617	-0.884	-10.16	6.475	3.287	-9.448*	-0.0410
	(1.849)	(1.840)	(9.692)	(9.860)	(2.919)	(4.508)	(2.262)
R^2	0.049	0.064	0.211	0.076	0.025	0.083	0.047

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 53: Self Esteem regression (whites only – controlling for and then conditional on schooling)

	Controls	Schl Dums	DO	GED	HSG	Some Coll	Coll
AFQT	0.164***	0.131**	0.372*	0.414**	0.258***	-0.159	-0.224*
	(0.0383)	(0.0403)	(0.170)	(0.140)	(0.0547)	(0.101)	(0.111)
9th Gr GPA	0.0942**	0.0500	0.0903	0.0942	-0.0328	0.290**	0.0130
	(0.0344)	(0.0378)	(0.133)	(0.121)	(0.0571)	(0.104)	(0.0834)
Reckless Behav.	-0.0000566	-0.0000575	-0.0000804	-0.000831*	0.0000672	-0.000162	-0.0000845
	(0.0000704)	(0.0000701)	(0.000256)	(0.000347)	(0.0000962)	(0.000184)	(0.000154)
GED		-0.128					
		(0.146)					
HSG		0.00525					
		(0.122)					
SC		0.138					
		(0.138)					
Coll		0.291					
		(0.150)					
Constant	-0.334	-0.536	-3.897	-0.955	0.0418	-9.019	4.163
	(2.328)	(2.322)	(10.31)	(9.437)	(3.488)	(5.817)	(4.418)
R^2	0.064	0.076	0.137	0.270	0.071	0.078	0.110

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

G Estimates for Sample Restricted to White Males.

G.1 Models for the Measurement System

Table 54: Estimates for Schooling Choice Model (white males)

Variable	$D_{0,1}$: Graduate HS vs. Drop out of HS		$D_{0,2}$: **GED** vs. **HS Dropout**		$D_{1,3}$: Enroll College vs. **HS Graduate**		$D_{3,4}$: **4-year College Degree** vs. **Some College**	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Broken Home	-0.510	0.118	-0.072	0.170	-0.037	0.121	-0.324	0.161
Num. Siblings	-0.054	0.024	-0.002	0.036	-0.072	0.022	-0.043	0.030
Mother's Highest Grade Comp.	0.166	0.028	0.114	0.043	0.110	0.025	0.135	0.031
Fathers's Highest Grade Comp.	0.077	0.020	0.043	0.033	0.158	0.017	0.108	0.021
Family Income 1979 th	0.019	0.005	0.015	0.009	0.009	0.004	0.009	0.004
constant	-1.799	0.595	-1.505	1.060	-3.983	0.539	-3.037	0.715
Urban 17	-0.189	0.107	0.466	0.182	0.128	0.094		
South 17	-0.592	0.133	0.426	0.224	0.187	0.126		
West 17	-0.445	0.137	0.291	0.241	-0.193	0.137		
Northeast 17	0.339	0.142	0.111	0.276	0.501	0.115		
local unemp17	3.727	1.973	3.602	3.316	5.125	1.801		
Long-Run Local Unemp.	-13.721	4.852	3.605	7.927	-7.565	4.392	-4.975	5.250
Age	0.051	0.022	-0.048	0.039	0.051	0.021	0.008	0.025
High School passrate of GED			-0.053	0.088				
Tuition Age 17					-0.250	0.064		
Local Unemp. Age 22							-1.147	1.859
Tuition Age 22							0.022	0.091
Urban 22							0.033	0.137
South 22							-0.106	0.163
West 22							-0.529	0.191
Northeast 22							0.048	0.164
Cognitive Factor	0.686	0.091	1.120	0.158	0.788	0.105	0.761	0.115
Socio-Emotional Factor	1.006	0.103	0.236	0.166	0.475	0.099	0.593	0.124
N	1830		378		1452		775	

Notes: The numbers in this table represent the estimated coefficients and standard errors associated with the node-specific educational choice models for the sequential education model. Terminal schooling levels are highlighted in bold. (a) Local average unemployment is the average local unemployment level over the previous 5 years. Local unemployment is the current unemployment rate. GED difficulty is the estimated number of high school graduates able to pass the test on a single try given the state's passing standard. Unemployment variables, tuition, region dummies, and urban status are as of age 17 for high school graduation, GED certification, and college enrollment choices. Tuition, unemployment variables, region dummies, and urban status are at age 22 for the choice to graduate from college.

Table 55: Measurement System: Estimates for Grades in 9th year and Adolescent Risky or Reckless Behavior (white males)

Variable	Language Arts GPA		Social Studies GPA		Science GPA		Math GPA		Reckless (HS < 12 years)		Reckless (HS G
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdEr
Broken Home	-0.101	0.062	-0.043	0.068	-0.141	0.064	-0.039	0.065	0.275	0.105	-0.018	0.13
Num. Siblings	-0.041	0.012	-0.027	0.012	-0.018	0.012	-0.016	0.012	0.018	0.022	0.077	0.02
Mother's Highest Grade Comp.	0.043	0.013	0.047	0.014	0.051	0.013	0.027	0.013	-0.017	0.022	-0.028	0.02
Fathers's Highest Grade Comp.	0.039	0.009	0.034	0.009	0.041	0.009	0.031	0.009	0.036	0.017	0.036	0.01
Family Income 1979 th	0.004	0.002	0.007	0.002	0.003	0.002	0.001	0.002	0.004	0.004	-0.000	0.00
constant	-1.070	0.149	-1.023	0.159	-0.986	0.151	-0.654	0.154	-2.908	3.843	6.912	11.07
Urban 14	-0.019	0.048	-0.072	0.052	-0.108	0.048	-0.036	0.051				
South 14	0.085	0.050	0.058	0.053	0.036	0.050	0.008	0.052				
Urban									0.164	0.095	-0.001	0.11
South									-0.298	0.102	-0.178	0.12
West									0.042	0.124	-0.061	0.14
Northeast									-0.048	0.127	0.141	0.12
Age									0.338	0.411	-0.581	1.05
Age Squared									-0.010	0.011	0.011	0.02
Illeg. Minor in Coll.											0.089	0.13
Cognitive Factor	0.413	0.054	0.460	0.054	0.438	0.052	0.400	0.049	0.000		0.000	
Socio-Emotional Factor	1.000		0.947	0.045	0.901	0.043	0.820	0.042	-0.018	0.135	-0.079	0.06
1/Precision	0.519	0.016	0.559	0.016	0.544	0.015	0.693	0.015				
N	1479		1191		1281		1532		1000		761	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the factor models of grades (column) on the set of controls presented in rows. GPA refers to grades received in 9th grade core classes. Reckless refers to comitting minor risky or reckless behavior. "—" denotes fixed at zero.

Table 56: Measurement System: Cognitive Test Scores - <12 Years of Education at the time of the test (white males)

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Broken Home	-0.079	0.069	-0.052	0.067	-0.101	0.076	-0.014	0.069	-0.089	0.066	-0.017	0.066
Num. Siblings	-0.013	0.013	-0.041	0.013	-0.043	0.015	-0.023	0.014	-0.009	0.013	-0.021	0.013
Mother's Highest Grade Comp.	0.068	0.016	0.096	0.015	0.084	0.017	0.058	0.016	0.084	0.015	0.045	0.015
Fathers's Highest Grade Comp.	0.031	0.011	0.039	0.011	0.043	0.013	0.029	0.012	0.043	0.011	0.019	0.011
Family Income 1979 th	0.010	0.003	0.006	0.003	0.007	0.003	0.011	0.003	0.010	0.003	0.011	0.003
constant	-1.499	2.511	-1.636	2.495	-3.756	2.778	-3.724	2.571	-2.570	2.408	-5.558	2.472
Urban	0.087	0.062	0.103	0.062	0.050	0.068	0.056	0.064	0.093	0.059	-0.008	0.061
South	-0.076	0.066	-0.132	0.066	-0.039	0.074	-0.152	0.068	0.011	0.064	-0.047	0.066
West	0.077	0.077	0.032	0.077	0.014	0.086	-0.051	0.080	-0.012	0.074	-0.035	0.077
Northeast	0.018	0.088	-0.002	0.086	0.005	0.096	0.005	0.088	0.068	0.084	-0.042	0.084
Age	-0.023	0.268	-0.066	0.266	0.152	0.296	0.232	0.274	0.080	0.257	0.424	0.263
Age Squared	0.002	0.007	0.004	0.007	-0.002	0.008	-0.006	0.007	-0.002	0.007	-0.010	0.007
Cognitive Factor	1.000		0.852	0.039	1.024	0.044	0.818	0.039	0.924	0.035	0.708	0.039
Socio-Emotional Factor	0.000		0.000		0.000		0.000		0.000		0.000	
1/Precision	0.470	0.017	0.551	0.017	0.572	0.019	0.597	0.017	0.474	0.016	0.607	0.017
N	769		769		769		769		769		769	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the factor equations of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed at zero.

Table 57: Measurement System: Cognitive Test Scores - 12 Years of Education at the time of the test (white males)

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Broken Home	-0.111	0.088	-0.180	0.077	-0.209	0.082	-0.049	0.089	-0.128	0.085	0.140	0.085
Num. Siblings	-0.003	0.016	-0.046	0.014	-0.023	0.015	-0.007	0.017	-0.032	0.016	0.012	0.016
Mother's Highest Grade Comp.	0.051	0.019	0.046	0.016	0.052	0.017	0.033	0.019	0.033	0.018	0.042	0.018
Fathers's Highest Grade Comp.	0.056	0.013	0.047	0.011	0.048	0.012	0.043	0.013	0.077	0.012	0.042	0.012
Family Income 1979 th	0.003	0.003	0.002	0.003	0.000	0.003	0.010	0.003	0.004	0.003	0.007	0.003
constant	4.662	4.683	2.205	4.122	5.699	4.393	2.557	4.806	1.196	4.529	-6.431	4.627
Urban	-0.025	0.065	0.059	0.058	0.039	0.062	-0.091	0.069	0.014	0.063	-0.044	0.066
South	-0.023	0.075	0.053	0.067	0.005	0.071	-0.093	0.078	-0.017	0.072	-0.162	0.075
West	-0.237	0.087	-0.036	0.078	-0.175	0.083	-0.203	0.091	-0.166	0.084	-0.233	0.089
Northeast	0.213	0.088	0.140	0.076	0.118	0.081	-0.082	0.089	0.285	0.084	-0.011	0.085
Age	-0.627	0.461	-0.379	0.406	-0.710	0.433	-0.364	0.474	-0.221	0.446	0.467	0.457
Age Squared	0.017	0.011	0.011	0.010	0.019	0.011	0.010	0.012	0.005	0.011	-0.010	0.011
Cognitive Factor	1.066	0.058	0.765	0.047	0.833	0.051	0.825	0.054	0.999	0.055	0.702	0.051
Socio-Emotional Factor	0.000		0.000		0.000		0.000		0.000		0.000	
1/Precision	0.465	0.018	0.522	0.016	0.547	0.017	0.643	0.019	0.474	0.017	0.657	0.019
N	701		701		701		701		701		701	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed to zero.

Table 58: Measurement System: Cognitive Test Scores - >12 Years of Education at the time of the test (white males)

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Broken Home	-0.119	0.093	-0.098	0.070	-0.197	0.082	-0.170	0.110	-0.287	0.100	-0.159	0.124
Num. Siblings	-0.018	0.015	-0.026	0.012	-0.024	0.014	-0.015	0.019	-0.022	0.016	-0.068	0.021
Mother's Highest Grade Comp.	0.044	0.015	0.016	0.012	0.017	0.014	0.002	0.018	0.028	0.017	0.058	0.021
Fathers's Highest Grade Comp.	0.024	0.011	0.021	0.008	0.001	0.009	0.035	0.012	0.039	0.012	-0.010	0.014
Family Income 1979 th	0.001	0.002	0.001	0.001	0.003	0.002	-0.001	0.002	0.004	0.002	0.002	0.003
constant	-0.102	6.846	-7.147	5.379	2.140	6.279	-5.037	8.467	-1.049	7.410	2.776	9.573
Urban	0.083	0.082	0.090	0.058	0.043	0.068	0.172	0.091	0.048	0.088	0.051	0.103
South	0.058	0.076	0.102	0.058	0.058	0.068	-0.122	0.091	0.050	0.082	-0.075	0.103
West	-0.017	0.084	-0.038	0.066	-0.095	0.076	-0.016	0.103	-0.146	0.091	-0.106	0.116
Northeast	0.072	0.089	0.133	0.061	0.065	0.071	-0.109	0.096	0.142	0.093	-0.060	0.107
Age	-0.031	0.655	0.657	0.513	-0.205	0.599	0.451	0.807	0.099	0.708	-0.337	0.913
Age Squared	0.001	0.016	-0.015	0.012	0.006	0.014	-0.010	0.019	-0.003	0.017	0.009	0.022
Cognitive Factor	0.962	0.091	0.376	0.042	0.434	0.049	0.543	0.065	0.981	0.077	0.531	0.071
Socio-Emotional Factor	0.000		0.000		0.000		0.000		0.000		0.000	
1/Precision	0.303	0.032	0.370	0.015	0.432	0.017	0.591	0.023	0.362	0.023	0.681	0.026
N	360		360		360		360		360		360	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed to zero.

Table 59: Early Outcomes: Estimates for "Early Risky Behaviors" (white males)

Variable	Tried Marijuana[a]		Daily Smoking[a]		Regular Drinking[a]		Intercourse[a]		Violent in 1979[b]			
									<12 yrs school		≥12 yrs school	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Broken Home	0.435	0.083	0.318	0.092	0.170	0.089	0.492	0.097				
Num. Siblings	0.024	0.017	0.048	0.018	0.028	0.018	-0.002	0.021				
Mother's Highest Grade Comp.	-0.011	0.018	-0.033	0.020	-0.006	0.019	-0.029	0.022				
Fathers's Highest Grade Comp.	-0.004	0.013	-0.040	0.015	-0.010	0.014	-0.022	0.016				
Family Income 1979 th	-0.000	0.003	-0.000	0.003	-0.002	0.003	-0.003	0.004				
constant	-0.580	0.209	-0.362	0.235	-0.927	0.223	-0.893	0.260				
Urban 14	0.272	0.077	0.086	0.086	0.134	0.083	0.234	0.100				
South 14	-0.125	0.074	-0.011	0.084	0.081	0.079	0.105	0.090				
Cognitive Factor	-0.115	0.050	-0.218	0.055	-0.118	0.053	-0.271	0.062				
Socio-Emotional Factor	-0.621	0.066	-0.491	0.070	-0.290	0.067	-0.533	0.078				
N	1828		1777		1821		1812					

Notes: The numbers in this table represent the estimated coefficients and standard errors associated with binary outcome models for the early risky behaviors on the set of controls presented in rows. Information about living in the West and Northeast is only available in 1979. a) The dependent variable takes a value of one if the individual has reported the behavior before age 15, and zero otherwise. b) The variable "Violent" takes a value of one if the individual participated in fighting or assault in 1979, and is estimated separately by education level to account for age differences in 1979.

G.2 Models for Labor Market Outcomes

Table 60: Outcome Model: Estimates for (Log) Wages at Age 30 by Schooling Level (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.015	0.027	-0.074	0.052	0.149	0.089	0.063	0.044	-0.086	0.070	-0.019	0.062
Num. Siblings	-0.006	0.005	-0.011	0.011	0.015	0.019	-0.006	0.008	0.011	0.013	0.005	0.011
Mother's Highest Grade Comp.	0.016	0.005	-0.004	0.013	-0.002	0.021	-0.001	0.010	0.016	0.014	0.017	0.010
Fathers's Highest Grade Comp.	0.014	0.004	0.017	0.011	0.026	0.016	0.011	0.007	-0.007	0.010	0.007	0.007
Family Income 1979 th	0.007	0.001	0.010	0.003	0.010	0.005	0.006	0.002	0.008	0.002	0.004	0.001
constant	2.070	0.072	2.046	0.173	1.708	0.324	2.265	0.129	2.363	0.214	2.174	0.153
Local Unemp (age 30)	-0.474	0.475	-0.516	1.160	1.247	1.715	-0.129	0.746	-1.854	1.186	0.053	0.990
Northeast 30	0.143	0.028	0.204	0.086	0.167	0.148	0.084	0.043	0.111	0.072	0.184	0.051
South 30	0.007	0.026	0.097	0.061	0.112	0.108	-0.035	0.041	0.038	0.067	-0.006	0.051
West 30	0.009	0.030	0.058	0.080	0.017	0.128	-0.008	0.048	0.053	0.070	-0.013	0.058
Urban 30	0.136	0.024	0.116	0.058	0.125	0.096	0.107	0.035	0.151	0.062	0.132	0.056
Cognitive Factor	0.182	0.015	0.092	0.053	0.168	0.066	0.133	0.025	0.036	0.042	0.247	0.042
Socio-Emotional Factor	0.035	0.019	-0.059	0.057	0.016	0.091	-0.085	0.032	0.043	0.056	0.043	0.047
1/Precision	0.399	0.007	0.308	0.017	0.455	0.028	0.383	0.011	0.409	0.017	0.382	0.013
N	1647		174		137		623		280		433	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of (log) wages on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 61: Outcome Model: Labor Market Participation at Age 30 by Schooling Level (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.344	0.124	-0.034	0.303	-0.593	0.319	-0.417	0.249	-0.039	0.378	-0.499	0.370
Num. Siblings	-0.015	0.027	-0.092	0.064	0.113	0.085	0.035	0.058	-0.057	0.066	0.044	0.085
Mother's Highest Grade Comp.	-0.013	0.028	0.071	0.081	0.064	0.079	-0.038	0.058	0.068	0.086	-0.140	0.070
Fathers's Highest Grade Comp.	-0.020	0.021	-0.032	0.055	-0.035	0.068	0.011	0.048	-0.040	0.053	-0.016	0.054
Family Income 1979 th	0.014	0.006	0.034	0.021	0.018	0.019	0.029	0.013	-0.001	0.012	0.013	0.010
constant	2.114	0.386	1.739	1.125	0.332	1.206	1.986	0.805	1.984	1.210	3.276	1.033
Local Unemp (age 30)	-4.490	2.457	-9.171	6.034	9.883	7.499	-7.889	4.863	-4.309	6.784	-3.453	6.772
Northeast 30	0.326	0.169	0.420	0.636	-0.224	0.600	0.931	0.431	0.327	0.406	0.128	0.338
South 30	0.157	0.135	0.384	0.355	-0.001	0.420	0.564	0.300	0.189	0.353	0.229	0.371
West 30	0.069	0.153	-0.408	0.420	-0.909	0.479	0.373	0.314	0.175	0.364	0.700	0.535
Urban 30	0.047	0.123	0.578	0.325	-0.303	0.393	-0.003	0.234	-0.283	0.361	0.300	0.347
Cognitive Factor	0.341	0.078	0.751	0.393	0.758	0.268	0.356	0.160	-0.002	0.233	0.477	0.257
Socio-Emotional Factor	0.080	0.102	0.126	0.324	-0.328	0.366	-0.100	0.210	0.055	0.289	0.393	0.373
N	1737		194		157		645		293		448	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary choice models of labor market participation on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 62: Outcome Model: White Collar Employment (Age 30) (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
broken	0.070	0.093	0.270	0.269	0.266	0.280	0.220	0.154	-0.034	0.218	0.077	0.303
numsibs	-0.030	0.018	0.040	0.055	-0.082	0.071	0.004	0.029	-0.012	0.042	-0.030	0.050
mhgc mi	0.072	0.020	0.067	0.073	0.047	0.068	0.040	0.035	0.015	0.046	0.055	0.051
fhgc mi	0.079	0.014	-0.007	0.058	0.057	0.052	0.065	0.024	0.012	0.030	0.063	0.036
faminc79 th	0.010	0.003	-0.007	0.015	0.006	0.014	0.007	0.006	-0.003	0.007	0.023	0.007
constant	-2.302	0.263	-2.799	0.928	-1.720	1.056	-2.099	0.470	-0.389	0.678	-1.376	0.738
local unemp30	-1.890	1.673	13.425	5.874	-3.641	6.272	-1.275	2.675	-2.257	3.703	-5.079	4.774
northeast30	0.245	0.099	0.850	0.482	-0.220	0.474	0.126	0.154	0.214	0.226	0.134	0.242
south30	0.287	0.091	0.581	0.353	-0.151	0.333	0.426	0.145	-0.016	0.208	0.289	0.255
west30	-0.085	0.104	0.859	0.434	-0.613	0.408	-0.074	0.172	-0.111	0.221	-0.185	0.276
curban30	0.290	0.084	-0.289	0.324	0.714	0.341	0.173	0.125	0.321	0.198	0.238	0.249
Fac0 loading	0.595	0.055	0.535	0.283	0.610	0.225	0.301	0.091	0.078	0.134	0.765	0.180
Fac1 loading	0.359	0.069	-0.183	0.290	-0.023	0.257	0.097	0.119	0.132	0.177	0.756	0.229
N	1620		170		134		614		274		428	

Notes: White-collar occupations are (i) professional, technical, and kindred; (ii) managers, officials, and proprietors; (iii) sales workers; (iv) farmers and farm managers; and (v) clerical and kindred. The numbers in this table represents the estimated coefficients and standard errors associated with binary model for whether or not the individual works in a white-collar occupation at age 30 on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 63: Outcome Model: Estimates for (Log) Present Value of Wages by Schooling Level (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Er
Broken Home	-0.088	0.031	-0.056	0.066	-0.048	0.090	0.016	0.049	-0.138	0.079	-0.055	0.079
Num. Siblings	-0.019	0.006	-0.035	0.014	-0.019	0.020	-0.001	0.009	-0.004	0.017	-0.010	0.014
Mother's Highest Grade Comp.	0.029	0.006	0.012	0.016	0.007	0.022	0.016	0.011	0.012	0.016	0.043	0.013
Fathers's Highest Grade Comp.	0.015	0.005	0.011	0.013	0.021	0.016	0.015	0.008	-0.019	0.011	0.003	0.009
Family Income 1979 th	0.010	0.001	0.017	0.004	0.016	0.005	0.010	0.002	0.007	0.002	0.007	0.002
constant	11.614	0.076	11.713	0.190	11.477	0.301	11.707	0.131	12.223	0.227	11.737	0.182
Urban 17	0.114	0.028	0.208	0.067	0.048	0.100	0.103	0.040	0.213	0.067	0.061	0.062
South 17	0.032	0.030	0.050	0.073	0.214	0.111	0.014	0.047	0.081	0.075	0.021	0.061
West 17	-0.067	0.036	-0.049	0.101	-0.154	0.127	-0.101	0.053	0.135	0.083	-0.123	0.084
Northeast 17	0.128	0.033	0.200	0.104	0.257	0.145	0.036	0.049	0.111	0.078	0.133	0.060
Cognitive Factor	0.237	0.018	0.344	0.069	0.392	0.065	0.145	0.028	0.028	0.047	0.247	0.054
Socio-Emotional Factor	0.073	0.023	0.034	0.070	-0.005	0.086	-0.093	0.037	0.023	0.063	0.096	0.061
1/Precision	0.465	0.008	0.396	0.022	0.481	0.029	0.426	0.012	0.460	0.020	0.465	0.016
N	1632		184		151		614		271		412	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of (log) wages on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

G.3 Models for Physical Health and Behaviors

Table 64: Outcome Model: Daily Smoking (Age 30) (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.271	0.090	0.572	0.268	-0.159	0.251	0.055	0.148	0.508	0.234	-0.080	0.290
Num. Siblings	0.049	0.018	0.143	0.060	0.005	0.056	0.006	0.029	0.063	0.044	0.007	0.045
Mother's Highest Grade Comp.	-0.057	0.019	0.037	0.063	-0.100	0.061	-0.006	0.033	0.028	0.050	-0.073	0.043
Fathers's Highest Grade Comp.	0.015	0.014	0.061	0.048	0.043	0.045	0.051	0.024	0.025	0.032	0.067	0.034
Family Income 1979 th	-0.006	0.003	0.004	0.014	-0.003	0.013	-0.008	0.006	0.002	0.007	-0.001	0.005
constant	0.072	0.225	-1.513	0.732	1.305	0.837	-0.764	0.402	-1.283	0.688	-1.179	0.653
Northeast 30	-0.145	0.100	0.068	0.422	-0.467	0.416	0.112	0.147	-0.226	0.247	-0.205	0.224
South 30	0.019	0.087	0.030	0.278	-0.578	0.320	0.119	0.139	-0.104	0.221	0.022	0.209
West 30	-0.020	0.103	-0.219	0.355	-0.041	0.378	-0.108	0.163	-0.031	0.233	-0.367	0.277
Urban 30	0.067	0.082	-0.093	0.270	0.107	0.272	0.103	0.118	0.049	0.204	0.390	0.283
Cognitive Factor	-0.278	0.052	-0.159	0.263	-0.391	0.186	-0.034	0.083	0.001	0.138	-0.090	0.187
Socio-Emotional Factor	-0.527	0.069	-0.690	0.294	-0.105	0.236	-0.146	0.114	-0.303	0.183	-0.390	0.210
N	1561		173		145		592		259		392	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary models for daily smoking (age 30) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 65: Outcome Model: Heavy Drinking (Age 30) (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.145	0.097	0.616	0.256	-0.025	0.325	0.165	0.166	-0.237	0.268	0.156	0.251
Num. Siblings	-0.004	0.019	0.024	0.055	0.099	0.075	-0.037	0.033	0.000	0.053	-0.027	0.044
Mother's Highest Grade Comp.	-0.018	0.021	0.081	0.068	0.172	0.083	0.016	0.037	-0.057	0.058	-0.097	0.045
Fathers's Highest Grade Comp.	0.022	0.015	-0.042	0.053	0.008	0.057	0.039	0.027	0.026	0.036	0.030	0.032
Family Income 1979 th	-0.002	0.003	0.013	0.015	0.011	0.021	-0.006	0.006	-0.006	0.008	-0.001	0.005
constant	-0.799	0.247	-1.552	0.732	-3.592	1.197	-1.115	0.459	-0.158	0.780	0.303	0.648
Northeast 30	-0.034	0.106	0.468	0.403	0.840	0.535	-0.019	0.167	-0.082	0.267	-0.276	0.218
South 30	-0.092	0.096	-0.027	0.301	0.670	0.428	-0.179	0.157	-0.207	0.252	0.083	0.205
West 30	-0.039	0.112	0.217	0.393	0.474	0.456	-0.178	0.187	0.126	0.259	-0.101	0.253
Urban 30	0.127	0.089	0.384	0.300	-0.046	0.327	0.163	0.133	0.122	0.224	0.000	0.237
Cognitive Factor	0.031	0.058	0.308	0.262	0.161	0.223	0.109	0.098	0.188	0.156	-0.123	0.174
Socio-Emotional Factor	-0.263	0.075	0.323	0.269	0.477	0.297	-0.233	0.130	-0.608	0.217	-0.539	0.198
N	1403		149		122		531		239		362	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary models of daily smoking (age 30) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 66: Outcome Model: Obesity (Age 40) (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.018	0.094	0.417	0.253	0.056	0.296	-0.122	0.160	-0.034	0.244	0.111	0.242
Num. Siblings	-0.003	0.018	0.008	0.052	-0.095	0.072	0.013	0.029	-0.046	0.054	0.039	0.042
Mother's Highest Grade Comp.	-0.020	0.020	-0.104	0.068	0.045	0.069	0.002	0.035	0.006	0.051	-0.059	0.042
Fathers's Highest Grade Comp.	-0.014	0.014	-0.041	0.050	-0.057	0.050	0.014	0.024	0.006	0.035	-0.017	0.031
Family Income 1979 th	-0.001	0.003	0.009	0.015	-0.001	0.019	0.002	0.006	-0.010	0.008	0.000	0.005
constant	-0.117	0.229	0.658	0.719	-0.190	0.928	-0.676	0.422	-0.287	0.719	-0.017	0.591
Northeast 40	0.061	0.103	-0.156	0.407	0.130	0.421	0.192	0.165	0.011	0.254	-0.008	0.207
South 40	-0.025	0.089	-0.208	0.300	-0.367	0.337	0.081	0.142	0.049	0.226	0.015	0.197
West 40	-0.177	0.111	-1.489	0.587	-0.460	0.389	0.124	0.178	-0.365	0.265	-0.091	0.244
Urban 40	0.068	0.077	-0.205	0.269	0.314	0.272	0.031	0.119	0.154	0.185	0.232	0.194
Cognitive Factor	-0.147	0.054	-0.362	0.300	0.189	0.201	-0.144	0.088	-0.090	0.147	-0.149	0.169
Socio-Emotional Factor	0.016	0.070	0.048	0.277	-0.054	0.274	0.170	0.117	-0.310	0.198	-0.001	0.194
N	1401		153		124		524		240		360	

Notes: Obesity has been more precisely defined as a BMI of 30 and above. The numbers in this table represents the estimated coefficients and standard errors associated with binary models of obesity (age 40) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 67: Outcome Model: Physical Health at Age 40 (PCS-12) (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.052	0.056	-0.087	0.192	0.181	0.210	-0.063	0.094	-0.001	0.141	-0.061	0.081
Num. Siblings	-0.019	0.011	-0.070	0.040	0.025	0.043	-0.003	0.018	-0.044	0.030	0.015	0.014
Mother's Highest Grade Comp.	0.034	0.012	0.009	0.050	0.031	0.050	0.037	0.021	0.008	0.030	0.022	0.013
Fathers's Highest Grade Comp.	0.010	0.008	0.039	0.037	0.015	0.035	0.006	0.015	-0.014	0.019	-0.005	0.010
Family Income 1979 th	0.002	0.002	-0.001	0.011	0.008	0.011	-0.003	0.004	0.006	0.004	0.001	0.002
constant	-0.404	0.137	-0.009	0.561	-1.233	0.670	-0.314	0.254	0.134	0.408	0.100	0.188
Northeast 40	-0.017	0.062	-0.735	0.315	0.143	0.331	0.003	0.099	0.119	0.153	-0.022	0.067
South 40	0.011	0.053	-0.123	0.231	0.229	0.249	0.014	0.085	0.151	0.135	-0.045	0.064
West 40	-0.061	0.064	-0.178	0.288	-0.031	0.283	-0.145	0.104	0.123	0.148	0.007	0.076
Urban 40	0.008	0.046	0.111	0.201	0.048	0.194	-0.012	0.070	-0.015	0.108	-0.070	0.060
Cognitive Factor	0.142	0.032	0.369	0.202	0.248	0.147	0.028	0.053	0.083	0.085	0.057	0.055
Socio-Emotional Factor	0.094	0.043	-0.012	0.205	-0.280	0.181	0.062	0.075	0.095	0.113	0.033	0.061
1/Precision	0.834	0.015	1.128	0.061	1.072	0.064	0.814	0.024	0.820	0.036	0.487	0.017
N	1579		172		145		596		265		401	

Notes: The PCS-12 scale is the Physical Component Summary (measures physical health) obtained from SF-12. SF-12 is a 12-question health survey designed by John Ware of the New England Medical Center Hospital (Ware, Kosinski, and Keller, 1996). The MCS-12 is designed to provide a measure of the respondent's mental and physical health irrespective of their proclivity to use formal health services. Respondents with a score above (below) 50 have better (worse) health than the typical person in the general U.S. population. Each one-point difference above or below 50 corresponds to a one-tenth of a standard deviation. For example, a person with a score of 30 is two standard deviations away from the mean. We standardized the SF-12 score to have mean zero and variance one in the overall population.

G.4 Models for Mental Health Outcomes

Table 68: Outcome Model: Mental Health at Age 40 (MCS-12) (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.073	0.059	0.080	0.185	0.350	0.212	-0.218	0.089	-0.125	0.136	-0.116	0.129
Num. Siblings	-0.022	0.011	-0.104	0.039	0.019	0.043	-0.005	0.017	0.010	0.029	0.005	0.023
Mother's Highest Grade Comp.	0.010	0.012	-0.033	0.048	-0.033	0.051	0.016	0.020	0.055	0.028	0.002	0.021
Fathers's Highest Grade Comp.	-0.004	0.009	0.047	0.036	0.050	0.036	-0.016	0.014	-0.024	0.019	-0.017	0.015
Family Income 1979 th	0.001	0.002	0.006	0.010	0.004	0.011	-0.001	0.003	0.002	0.004	-0.001	0.003
constant	0.240	0.143	0.787	0.541	-0.488	0.676	0.337	0.240	-0.192	0.393	0.513	0.299
Northeast 40	-0.043	0.065	-0.586	0.304	-0.038	0.334	-0.067	0.093	0.269	0.148	-0.004	0.107
South 40	-0.108	0.056	-0.401	0.223	0.027	0.252	-0.099	0.080	0.201	0.130	-0.058	0.101
West 40	-0.024	0.066	-0.272	0.277	0.096	0.286	-0.052	0.098	0.241	0.142	-0.121	0.120
Urban 40	-0.082	0.048	-0.057	0.194	-0.238	0.195	-0.020	0.067	-0.234	0.104	-0.070	0.095
Cognitive Factor	0.056	0.034	0.399	0.192	0.228	0.148	0.030	0.050	-0.035	0.081	-0.078	0.088
Socio-Emotional Factor	0.061	0.045	0.207	0.197	-0.377	0.195	-0.055	0.068	0.248	0.110	0.140	0.100
1/Precision	0.871	0.016	1.084	0.060	1.079	0.066	0.771	0.022	0.786	0.035	0.774	0.028
N	1579		172		145		596		265		401	

Notes: The MCS-12 scale is the Mental Component Summary (measures mental health) obtained from SF-12. SF-12 is a 12-question health survey designed by John Ware of the New England Medical Center Hospital (Ware, Kosinski, and Keller, 1996). The MCS-12 is designed to provide a measure of the respondent's mental and physical health irrespective of their proclivity to use formal health services. Respondents with a score above (below) 50 have better (worse) health than the typical person in the general U.S. population. Each one-point difference above or below 50 corresponds to a one-tenth of a standard deviation. For example, a person with a score of 30 is two standard deviations away from the mean. We standardized the SF-12 score to have mean zero and variance one in the overall population.

Table 69: Outcome Model: The Center for Epidemiologic Studies Depression Scale (CES-D) (Age 40) (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.088	0.057	-0.038	0.204	0.361	0.194	-0.162	0.094	-0.101	0.105	-0.051	0.107
Num. Siblings	-0.017	0.011	-0.112	0.043	-0.004	0.040	0.011	0.018	0.007	0.022	0.020	0.019
Mother's Highest Grade Comp.	0.025	0.012	0.005	0.053	0.047	0.046	0.007	0.021	0.023	0.022	0.006	0.017
Fathers's Highest Grade Comp.	0.010	0.008	0.019	0.040	0.034	0.033	0.003	0.015	-0.027	0.014	0.006	0.013
Family Income 1979 th	0.001	0.002	0.009	0.012	0.015	0.011	-0.006	0.004	0.003	0.003	-0.001	0.002
constant	-0.105	0.139	0.579	0.602	-1.100	0.616	0.285	0.255	0.271	0.304	0.160	0.252
Northeast 40	-0.072	0.063	-0.273	0.334	-0.116	0.308	-0.175	0.098	0.098	0.114	0.047	0.090
South 40	-0.120	0.054	-0.519	0.248	-0.034	0.231	-0.179	0.085	0.224	0.101	-0.017	0.085
West 40	-0.159	0.065	-0.725	0.312	-0.355	0.262	-0.229	0.104	0.221	0.110	-0.045	0.101
Urban 40	-0.032	0.046	-0.032	0.215	-0.253	0.180	-0.010	0.071	-0.155	0.080	0.032	0.080
Cognitive Factor	0.196	0.033	0.561	0.219	0.248	0.135	0.134	0.053	0.073	0.063	-0.033	0.073
Socio-Emotional Factor	0.026	0.045	-0.025	0.243	-0.296	0.176	-0.095	0.074	0.121	0.085	0.022	0.082
1/Precision	0.844	0.015	1.189	0.066	0.999	0.060	0.814	0.024	0.608	0.027	0.650	0.023
N	1572		168		146		594		264		400	

Notes: CES-D is one of the most common screening tests for helping an individual to determine his or her depression quotient. This scale measures symptoms of depression, discriminates between clinically depressed individuals and others, and is highly correlated with other depression rating scales (see Radloff, 1977; Ross and Mirowsky, 1989). We form the scale summing the scores from the items: "I did not feel like eating; my appetite was poor", "I had trouble keeping my mind on what I was doing", "I felt depressed", "I felt that everything I did was an effort", "My sleep was restless", "I felt sad" and "I could not get *going*". For each items the potential answers are: "0 Rarely/None of the time/1 Day", "1 Some/A little of the time/1-2 Days", "2 Occasionally/Moderate amount of the time/3-4 Days", "3 Most/All of the time/5-7 Days". We standardized the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the models of CES-D for the set of controls presented in rows. Each column contains the results obtained for a particular schooling level. The CES-D index is scaled so larger numbers are beneficial outcomes (less depression).

Table 70: Outcome Model: Pearlin's "Personal Mastery Scale" (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.023	0.060	-0.044	0.133	0.148	0.169	0.106	0.104	-0.081	0.162	0.147	0.142
Num. Siblings	-0.022	0.012	-0.034	0.028	0.010	0.036	-0.012	0.019	-0.014	0.032	-0.008	0.025
Mother's Highest Grade Comp.	0.030	0.012	0.065	0.033	0.056	0.042	0.009	0.023	-0.034	0.034	0.027	0.023
Fathers's Highest Grade Comp.	0.020	0.009	0.001	0.026	0.030	0.031	0.021	0.016	0.004	0.023	-0.008	0.017
Family Income 1979 th	0.003	0.002	0.006	0.008	0.020	0.009	0.001	0.004	-0.002	0.005	0.002	0.003
constant	-0.599	0.146	-0.962	0.393	-1.179	0.547	-0.453	0.274	0.628	0.469	0.177	0.333
Northeast 30	0.133	0.065	-0.243	0.228	0.397	0.271	0.201	0.101	0.117	0.167	-0.018	0.118
South 30	0.036	0.058	-0.023	0.148	-0.048	0.203	0.131	0.096	-0.018	0.153	-0.015	0.113
West 30	0.097	0.067	0.102	0.199	-0.065	0.228	0.080	0.110	0.163	0.162	0.037	0.134
Urban 30	0.014	0.054	-0.064	0.144	-0.086	0.178	0.065	0.081	0.076	0.142	-0.075	0.129
Cognitive Factor	0.245	0.034	0.161	0.138	0.394	0.119	0.264	0.057	-0.017	0.097	-0.031	0.095
Socio-Emotional Factor	0.103	0.044	-0.078	0.148	0.250	0.159	0.056	0.075	0.046	0.128	-0.023	0.111
1/Precision	0.933	0.016	0.843	0.043	0.926	0.053	0.913	0.026	0.975	0.040	0.903	0.030
N	1736		195		161		645		293		442	

Notes: Pearlins "Personal Mastery Scale" consists of 7 items which are answered on a 4-point (4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree) scale and has been shown to exhibit reasonable internal reliability and good construct validity (Pearlin and Schooler, 1978; Pearlin, Menaghan, Lieberman, and Mullan, 1981). The items are "there is really no way i can solve some of the problems i have", "sometimes i feel that i'm being pushed around in life" , "i have little control over the things that happen to me", "i can do just about anything i really set my mind to", "i often feel helpless in dealing with the problems of life", "what happens to me in the future mostly depends on me", "there is little i can do to change many of the important things in my life". We form the scale summing the scores from the items, and standardizing the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the models for the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 71: Outcome Model: Rosenberg's Self-Esteem Scale (white males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.009	0.067	0.168	0.161	0.353	0.223	0.073	0.108	0.143	0.181	-0.235	0.157
Num. Siblings	-0.019	0.013	0.000	0.034	-0.037	0.049	-0.013	0.020	0.016	0.039	-0.032	0.028
Mother's Highest Grade Comp.	0.039	0.014	0.062	0.044	-0.002	0.051	0.053	0.024	0.026	0.036	0.013	0.027
Fathers's Highest Grade Comp.	0.005	0.010	0.012	0.031	-0.019	0.037	-0.006	0.017	-0.006	0.024	-0.013	0.019
Family Income 1979 th	-0.001	0.002	-0.001	0.010	0.016	0.014	0.003	0.004	0.003	0.005	-0.010	0.003
constant	-0.444	0.165	-0.617	0.464	-0.007	0.689	-0.586	0.286	-0.241	0.518	0.668	0.388
Northeast 40	0.224	0.074	0.369	0.272	0.328	0.331	-0.023	0.114	0.218	0.188	0.423	0.133
South 40	0.133	0.064	-0.073	0.198	0.177	0.254	0.137	0.096	0.079	0.168	0.262	0.127
West 40	0.263	0.077	0.662	0.237	0.109	0.288	0.113	0.123	0.073	0.187	0.499	0.153
Urban 40	-0.097	0.055	-0.316	0.177	-0.440	0.200	-0.053	0.081	-0.074	0.133	-0.137	0.120
Cognitive Factor	0.302	0.039	0.601	0.175	0.377	0.150	0.321	0.061	0.028	0.107	0.010	0.114
Socio-Emotional Factor	0.094	0.050	-0.023	0.165	-0.044	0.214	0.018	0.080	0.350	0.144	-0.137	0.128
1/Precision	0.936	0.018	0.870	0.052	1.008	0.065	0.875	0.027	0.952	0.045	0.914	0.034
N	1381		147		121		525		233		355	

Notes: Rosenberg's Self-Esteem Scale consists of 11 items which are answered on a 4-point (4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree). The items are "I feel that I'm a person of worth, at least on equal basis with others", "I feel that I have a number of good qualities" , "All in all, I am inclined to feel that I am a failure", "I am able to do things as well as most other people", "I feel I do not have much to be proud of", "I take a positive attitude toward myself", "On the whole, I am satisfied with myself", "I wish I could have more respect for myself" , "I certainly feel useless at times", "At times I think I am no good at all". We form the scale summing the scores from the items, and standardizing the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

H Estimates for Sample Restricted to black males.

H.1 Models for the Measurement System

Table 72: Estimates for Schooling Choice Model (black males)

Variable	$D_{0,1}$: Graduate HS vs. Drop out of HS		$D_{0,2}$: **GED** vs. **HS Dropout**		$D_{1,3}$: Enroll College vs. **HS Graduate**		$D_{3,4}$: **4-year College Degree** vs. **Some College**	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Broken Home	-0.177	0.247	-0.253	0.357	0.530	0.326	0.020	0.473
Num. of Siblings	-0.019	0.040	0.090	0.061	-0.024	0.054	-0.057	0.094
Mother's HGC	0.060	0.057	0.127	0.089	0.307	0.103	0.080	0.127
Father's HGC	0.001	0.044	-0.035	0.065	-0.013	0.066	0.025	0.089
Fam. Income (1979)	0.003	0.016	0.032	0.027	0.049	0.022	0.026	0.023
constant	-0.407	1.511	0.606	2.322	-4.105	2.020	-4.370	3.194
Urban 17	-0.347	0.288	0.347	0.528	0.308	0.350		
South 17	0.586	0.363	0.033	0.456	0.145	0.545		
West 17	-0.465	0.485	1.162	0.743	0.425	0.755		
Northeast 17	0.102	0.346	0.309	0.513	-0.004	0.529		
Local Unemp. 17	-0.894	4.811	23.334	8.862	-0.557	6.078		
Avg. Local Unemp..	8.673	13.193	-41.175	20.364	-2.834	16.946	6.832	20.471
Age 1980	-0.002	0.047	-0.107	0.074	-0.023	0.064	0.062	0.094
GED HS Passrate 1988			0.194	0.153				
Tuition 17					-0.144	0.224		
Local Unemp. 22							-3.377	8.409
Tuitiion 22							-0.276	0.378
Urban 22							0.825	0.675
South 22							-0.031	0.773
West 22							-0.829	1.034
Northeast 22							-0.756	0.844
Cognitive Factor	0.879	0.265	0.412	0.542	0.550	0.243	0.779	0.303
Socioemotional Factor	1.101	0.283	-0.244	0.519	1.341	0.397	0.784	0.642
N	263		94		169		70	

Notes: The numbers in this table represent the estimated coefficients and standard errors associated with the node-specific educational choice models for the sequential education model. Terminal schooling levels are highlighted in bold. (a) Local average unemployment is the average Local Unemp. loyment level over the previous 5 years. Local Unemp. loyment is the current unemployment rate. GED difficulty is the estimated number of high school graduates able to pass the test on a single try given the state's passing standard. Unemployment variables, tuition, region dummies, and Urban status are as of age 17 for high school graduation, GED certification, and college enrollment choices. Tuition, unemployment variables, region dummies, and Urban status are at age 22 for the choice to graduate from college.

Table 73: Measurement System: Estimates for Grades in 9th year and Adolescent Risky or Reckless Behavior (black males)

Variable	Language Arts GPA		Social Studies GPA		Science GPA		Math GPA		Reckless (HS < 12 years)		Reckless (HS Grad)	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Broken Home	0.261	0.145	0.092	0.150	-0.166	0.147	0.189	0.147	0.219	0.251	0.514	0.390
Num. of Siblings	-0.017	0.025	0.017	0.025	0.009	0.025	0.001	0.025	-0.036	0.041	0.021	0.064
Mother's HGC	0.022	0.035	0.043	0.036	0.042	0.035	0.029	0.035	0.006	0.057	0.194	0.099
Father's HGC	-0.042	0.027	-0.017	0.026	-0.018	0.028	-0.035	0.026	-0.063	0.047	-0.163	0.073
Fam. Income (1979)	0.013	0.008	0.016	0.008	-0.006	0.008	0.016	0.008	0.007	0.016	0.000	0.020
constant	-1.160	0.444	-1.457	0.471	-0.828	0.457	-0.883	0.460	1.492	11.237	25.323	42.835
Urban 14	0.462	0.172	0.262	0.174	-0.008	0.174	0.152	0.180				
South 14	0.151	0.141	0.076	0.150	0.076	0.147	0.048	0.141				
Urban									-0.133	0.311	-0.396	0.391
South									0.368	0.290	-0.969	0.564
West									1.063	0.501	0.043	0.992
Northeast									0.258	0.368	-0.222	0.599
Age 1980									-0.057	1.196	-2.232	4.133
Age Squared									0.001	0.031	0.049	0.099
Risky Behave Coll.											0.242	0.508
Cognitive Factor	0.247	0.128	0.217	0.142	0.596	0.134	0.380	0.127	0.000		0.000	
Socioemotional Factor	1.000		1.102	0.154	1.023	0.135	0.886	0.140	0.514	0.390	-0.025	0.082
1/Precision	0.627	0.044	0.571	0.052	0.492	0.049	0.705	0.043				
N	182		159		135		190		157		86	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the factor models of grades (column) on the set of controls presented in rows. GPA refers to grades received in 9th grade core classes. Reckless refers to comitting minor risky or reckless behavior. "—" denotes fixed at zero.

Table 74: Measurement System: Cognitive Test Scores - <12 Years of Education at the time of the test (black males)

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Broken Home	-0.025	0.082	0.247	0.144	-0.029	0.153	0.205	0.158	0.005	0.066	0.135	0.138
Num. of Siblings	-0.002	0.014	-0.054	0.024	-0.036	0.025	-0.044	0.026	-0.006	0.012	-0.029	0.023
Mother's HGC	0.018	0.018	-0.007	0.032	0.033	0.034	-0.052	0.035	-0.015	0.014	-0.036	0.031
Father's HGC	-0.006	0.015	0.016	0.027	0.033	0.028	0.039	0.029	0.008	0.012	0.030	0.026
Fam. Income (1979)	-0.004	0.005	0.003	0.009	-0.008	0.009	-0.006	0.010	-0.003	0.004	0.005	0.009
constant	-0.024	3.425	5.330	6.112	-1.137	6.515	8.762	6.742	-0.047	2.701	2.614	5.914
Urban	-0.013	0.102	0.053	0.183	-0.321	0.195	0.207	0.202	-0.126	0.080	0.454	0.178
South	0.079	0.090	-0.229	0.160	-0.330	0.170	0.106	0.176	0.052	0.071	0.044	0.155
West	-0.015	0.125	-0.035	0.226	-0.121	0.241	0.240	0.250	0.005	0.098	-0.067	0.221
Northeast	0.036	0.119	-0.352	0.208	-0.239	0.221	0.010	0.228	0.203	0.097	-0.260	0.199
Age 1980	-0.080	0.363	-0.640	0.648	-0.002	0.691	-1.010	0.714	-0.014	0.287	-0.428	0.626
Age Squared	0.002	0.010	0.016	0.017	0.001	0.018	0.026	0.019	-0.001	0.008	0.011	0.016
Cognitive Factor	1.000		1.306	0.171	1.255	0.175	1.150	0.183	1.039	0.094	0.789	0.152
Socioemotional Factor	0.000		0.000		0.000		0.000		0.000		0.000	
1/Precision	0.337	0.024	0.643	0.043	0.694	0.045	0.728	0.046	0.236	0.021	0.650	0.040
N	141		141		141		141		141		141	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the factor equations of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed at zero.

Table 75: Measurement System: Cognitive Test Scores - 12 Years of Education at the time of the test (black males)

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Broken Home	0.178	0.116	0.577	0.151	0.599	0.147	0.282	0.176	0.028	0.109	0.170	0.162
Num. of Siblings	0.006	0.018	-0.070	0.024	-0.083	0.023	0.003	0.028	-0.013	0.017	-0.080	0.027
Mother's HGC	0.022	0.026	-0.025	0.035	-0.061	0.034	0.016	0.041	0.064	0.025	-0.056	0.038
Father's HGC	0.032	0.021	0.003	0.028	0.019	0.027	0.050	0.032	-0.008	0.020	0.038	0.029
Fam. Income (1979)	0.010	0.010	0.003	0.012	0.017	0.012	0.010	0.014	0.006	0.009	0.001	0.011
constant	-1.374	7.661	-1.396	10.087	9.702	9.938	-7.433	11.921	-0.064	7.253	4.907	11.298
Urban	-0.245	0.149	-0.254	0.189	-0.297	0.181	-0.340	0.219	-0.200	0.136	-0.023	0.176
South	-0.205	0.152	-0.696	0.200	-0.217	0.197	-0.140	0.235	-0.266	0.143	-0.027	0.219
West	0.284	0.285	-0.521	0.377	-0.049	0.371	0.794	0.444	-0.415	0.270	-0.530	0.426
Northeast	-0.268	0.194	-0.442	0.255	-0.303	0.249	-0.086	0.299	-0.294	0.182	-0.091	0.283
Age 1980	-0.009	0.757	0.157	0.997	-0.911	0.982	0.653	1.177	-0.044	0.716	-0.506	1.115
Age Squared	0.001	0.019	-0.004	0.025	0.021	0.024	-0.018	0.029	-0.000	0.018	0.012	0.027
Cognitive Factor	0.781	0.127	0.972	0.148	0.916	0.134	1.079	0.177	0.703	0.108	0.447	0.132
Socioemotional Factor	0.000		0.000		0.000		0.000		0.000		0.000	
1/Precision	0.372	0.035	0.499	0.045	0.494	0.046	0.594	0.053	0.356	0.033	0.608	0.048
N	86		86		86		86		86		86	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed to zero.

Table 76: Measurement System: Cognitive Test Scores - >12 Years of Education at the time of the test (black males)

Variables	Arithmetic Reasoning		Word Knowledge		Paragraph Comprehension		Numerical Operatons		Math Knowledge		Coding Speed	
	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.	β	Std. Err.
Broken Home	1.161	0.053	0.789	0.255	0.606	0.189	0.816	0.266	0.796	0.143	0.729	0.245
Num. of Siblings	-0.097	0.011	-0.170	0.051	-0.167	0.038	-0.075	0.053	-0.135	0.029	-0.142	0.049
Mother's HGC	0.148	0.016	0.031	0.082	-0.018	0.060	0.070	0.085	-0.035	0.046	-0.052	0.078
Father's HGC	-0.015	0.010	0.035	0.047	-0.017	0.035	-0.053	0.049	0.013	0.026	-0.045	0.045
Fam. Income (1979)	0.016	0.002	0.001	0.011	0.004	0.008	0.028	0.011	0.033	0.006	0.022	0.010
constant	-12.339	5.509	-1.343	23.983	-52.076	17.768	18.893	24.957	-7.760	13.707	-33.578	23.010
Urban	0.463	0.083	0.228	0.325	0.240	0.241	-0.166	0.338	0.586	0.190	-0.011	0.312
South	0.651	0.068	-0.264	0.313	-0.160	0.232	0.029	0.326	0.159	0.177	-0.651	0.300
West	1.281	0.093	-0.545	0.480	-0.343	0.355	1.495	0.499	0.010	0.267	-0.486	0.460
Northeast	-0.566	0.065	-1.157	0.311	-0.799	0.230	-0.256	0.323	-0.953	0.175	-0.747	0.298
Age 1980	0.769	0.540	-0.073	2.342	5.063	1.735	-1.967	2.437	0.553	1.339	3.239	2.247
Age Squared	-0.016	0.013	0.005	0.056	-0.121	0.042	0.048	0.058	-0.011	0.032	-0.075	0.054
Cognitive Factor	0.764	0.067	0.425	0.111	0.375	0.084	0.398	0.115	0.840	0.092	0.409	0.107
Socioemotional Factor	0.000		0.000		0.000		0.000		0.000		0.000	
1/Precision	0.103	0.014	0.555	0.066	0.411	0.049	0.578	0.068	0.307	0.037	0.532	0.063
N	36		36		36		36		36		36	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of each cognitive test score (column) on the set of controls presented in rows. "—" denotes fixed to zero.

Table 77: Early Outcomes: Estimates for "Early Risky Behaviors" (black males)

Variable	Tried Marijuana[a]		Daily Smoking[a]		Regular Drinking[a]		Intercourse[a]		Violent in 1979[b]			
									<12 yrs school		≥12 yrs school	
	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.	β	StdErr.
Broken Home	0.344	0.206	0.661	0.248	0.854	0.242	0.039	0.191				
Num. of Siblings	0.022	0.034	-0.002	0.039	-0.001	0.038	0.047	0.032				
Mother's HGC	0.035	0.047	0.051	0.055	-0.002	0.052	0.009	0.044				
Father's HGC	-0.017	0.037	-0.043	0.043	-0.021	0.044	-0.033	0.033				
Fam. Income (1979)	-0.014	0.013	-0.009	0.016	0.008	0.014	-0.018	0.012				
constant	-1.155	0.650	-1.371	0.785	-1.325	0.727	-0.048	0.587				
Urban 14	0.396	0.276	0.048	0.304	-0.023	0.295	-0.022	0.237				
South 14	-0.089	0.191	-0.073	0.221	-0.009	0.213	0.008	0.181				
Cognitive Factor	0.184	0.153	0.098	0.191	-0.148	0.193	0.129	0.141				
Socioemotional Factor	-0.712	0.205	-0.829	0.253	-0.510	0.223	-0.288	0.172				
N	262		255		262		259					

Notes: The numbers in this table represent the estimated coefficients and standard errors associated with binary outcome models for the early risky behaviors on the set of controls presented in rows. Information about living in the West and Northeast is only available in 1979. a) The dependent variable takes a value of one if the individual has reported the behavior before age 15, and zero otherwise. b) The variable "Violent" takes a value of one if the individual participated in fighting or assault in 1979, and is estimated separately by education level to account for age differences in 1979.

H.2 Models for Labor Market Outcomes

Table 78: Outcome Model: Estimates for (Log) Wages at Age 30 by Schooling Level (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.012	0.064	0.033	0.147	0.046	0.128	0.053	0.107	-0.137	0.149	-0.118	0.171
Num. of Siblings	0.001	0.010	0.014	0.021	0.008	0.025	0.003	0.017	0.028	0.024	-0.035	0.033
Mother's HGC	0.009	0.015	-0.027	0.024	0.007	0.041	-0.030	0.028	0.062	0.061	0.017	0.045
Father's HGC	0.004	0.011	-0.004	0.020	-0.015	0.025	0.021	0.020	-0.023	0.035	-0.046	0.036
Fam. Income (1979)	0.006	0.004	0.000	0.012	-0.007	0.006	0.019	0.008	0.011	0.008	-0.005	0.006
constant	2.115	0.232	2.352	0.532	2.611	0.589	2.248	0.391	1.458	0.739	2.389	0.668
Local Unemp. 30	0.246	1.356	-0.976	2.775	2.546	3.105	1.058	2.404	3.157	3.713	1.581	3.225
Northeast 30	0.086	0.095	0.393	0.145	-0.365	0.186	-0.235	0.184	0.513	0.309	0.732	0.258
South 30	-0.064	0.080	0.104	0.163	-0.285	0.151	-0.189	0.140	0.181	0.225	0.031	0.208
West 30	-0.055	0.134	-0.192	0.297	-0.043	0.259	-0.021	0.336	-0.183	0.300	0.340	0.264
Urban 30	-0.030	0.089	0.009	0.161	-0.022	0.179	-0.063	0.137	-0.151	0.212	0.707	0.337
Cognitive Factor	0.177	0.046	0.133	0.199	0.646	0.267	0.170	0.081	0.009	0.122	-0.068	0.083
Socioemotional Factor	0.191	0.058	0.012	0.186	0.243	0.180	0.104	0.117	0.121	0.169	0.168	0.181
1/Precision	0.388	0.019	0.266	0.032	0.254	0.043	0.398	0.031	0.349	0.042	0.280	0.040
N	214		34		33		84		35		28	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of (log) wages on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 79: Outcome Model: Labor Market Participation at Age 30 by Schooling Level (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.309	0.258	-0.021	0.624	-0.643	0.863	1.318	0.650	138.157	0.000	3.166	92858.202
Num. of Siblings	0.008	0.042	0.091	0.117	-0.118	0.175	0.059	0.090	9.660	0.000	-0.347	5436.062
Mother's HGC	-0.004	0.061	0.024	0.140	-0.727	0.428	0.056	0.135	45.830	0.000	1.564	8080.900
Father's HGC	0.000	0.048	-0.037	0.134	0.083	0.174	-0.012	0.089	-12.247	0.000	-0.354	11117.798
Fam. Income (1979)	0.043	0.020	-0.060	0.067	0.080	0.053	0.090	0.050	8.661	0.000	0.346	4564.691
constant	0.606	0.972	1.144	2.407	11.363	6.836	5.737	5954.793	15.428	0.000	-29.645	80911.130
Local Unemp. 30	-8.432	5.494	-22.046	14.389	-9.470	17.386	-3.551	14.581	-4960.088	0.000	71.624	621831.132
Northeast 30	-0.414	0.377	-1.123	0.876	-2.783	1.648	0.214	6050.302	52.459	0.000	7.364	75432.589
South 30	0.034	0.322	-0.258	0.902	-1.299	1.367	-6.622	5954.793	-47.970	0.000	11.829	15517.234
West 30	-1.180	0.422	-3.075	1.358	-3.490	1.780	-7.806	5954.793	64.305	0.000	5.498	50701.162
Urban 30	0.710	0.282	2.295	0.861	-0.393	1.267	0.220	0.516	-139.315	0.000	4.375	41366.971
Cognitive Factor	0.614	0.230	0.190	1.031	1.385	1.844	0.961	0.576	106.171	0.000	0.001	18420.518
Socioemotional Factor	-0.046	0.210	-0.839	1.053	-0.116	0.985	-0.537	0.514	-0.886	0.000	0.001	5610.673
N	254		51		41		95		38		29	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary choice models of labor market participation on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 80: Outcome Model: White Collar Employment (Age 30) (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β
Broken Home	0.097	0.251	-33.802	55210.575	2.970	3801.105	-0.253	0.417	100.577	22644.988	89.756
Num. of Siblings	-0.041	0.042	4.487	2275.964	-8.584	1748.132	-0.100	0.076	-8.757	1602.288	-23.735
Mother's HGC	0.057	0.059	2.106	1232.112	-10.214	1809.360	-0.040	0.111	-126.637	23539.024	-60.093
Father's HGC	0.016	0.046	-8.537	2643.628	-5.285	2085.170	0.034	0.083	52.254	9809.158	2.683
Fam. Income (1979)	0.022	0.015	-0.211	623.512	0.504	307.577	0.001	0.031	-6.006	1014.460	-6.775
constant	-2.145	0.972	96.639	107456.497	198.945	35082.090	-0.874	1.637	1523.216	279387.871	770.009
Local Unemp. 30	-0.447	5.112	-366.290	175334.509	236.684	160900.777	1.727	9.339	-7981.094	1540519.073	6501.040
Northeast 30	0.187	0.357	36.144	14142.893	-18.399	15911.828	-0.445	0.729	93.809	20393.995	132.409
South 30	-0.037	0.305	-53.779	52707.642	-29.565	5436.649	-0.056	0.538	-180.697	33068.625	-377.187
West 30	0.484	0.462	25.958	56899.083	42.706	20316.021	0.418	1.160	-552.529	1209259.928	-18.171
Urban 30	0.539	0.427	-21.102	60653.788	-23.847	10909.590	0.592	0.617	102.643	22557.153	-77.713
Cognitive Factor	0.482	0.164	-0.001	8368.197	0.003	5252.259	0.062	0.295	349.643	67252.132	55.773
Socioemotional Factor	0.331	0.214	-0.001	2008.890	-0.001	1955.174	-0.290	0.457	-248.975	46517.696	-0.252
N	208		32		31		83		34		28

Notes: White-collar occupations are (i) professional, technical, and kindred; (ii) managers, officials, and proprietors; (iii) sales workers; (iv) farmers and farm managers; and (v) clerical and kindred. The numbers in this table represents the estimated coefficients and standard errors associated with binary model for whether or not the individual works in a white-collar occupation at age 30 on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 81: Outcome Model: Estimates for (Log) Present Value of Wages by Schooling Level (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.120	0.096	-0.044	0.242	-0.267	0.303	0.002	0.125	-0.255	0.157	0.006	0.153
Num. of Siblings	0.006	0.016	-0.067	0.039	0.032	0.056	-0.005	0.020	0.022	0.025	0.044	0.032
Mother's HGC	0.028	0.023	-0.043	0.057	-0.041	0.083	0.008	0.031	0.038	0.059	0.020	0.036
Father's HGC	0.026	0.017	0.028	0.044	-0.008	0.055	0.012	0.022	0.017	0.033	0.008	0.035
Fam. Income (1979)	0.018	0.006	0.042	0.026	0.007	0.015	0.043	0.010	-0.016	0.010	0.002	0.007
constant	11.072	0.323	11.472	0.864	12.788	1.374	11.201	0.418	12.053	0.780	12.130	0.578
Urban 17	-0.068	0.113	0.515	0.295	-0.242	0.447	-0.290	0.127	0.024	0.174	-0.298	0.225
South 17	0.069	0.120	0.011	0.271	-0.445	0.326	0.214	0.174	-0.356	0.231	-0.053	0.218
West 17	-0.283	0.198	-0.825	0.441	-0.063	0.486	-0.759	0.518	-0.357	0.310	0.471	0.288
Northeast 17	-0.051	0.144	-0.105	0.300	-1.124	0.414	0.185	0.214	0.026	0.337	0.457	0.257
Cognitive Factor	0.333	0.069	0.660	0.339	0.653	0.437	0.214	0.100	0.268	0.109	-0.067	0.083
Socioemotional Factor	0.207	0.085	0.659	0.395	-0.094	0.361	0.046	0.130	-0.257	0.164	0.239	0.180
1/Precision	0.612	0.029	0.525	0.115	0.679	0.080	0.483	0.037	0.343	0.044	0.265	0.042
N	229		44		38		87		35		25	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models of (log) wages on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

H.3 Models for Physical Health and Behaviors

Table 82: Outcome Model: Daily Smoking (Age 30) (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.101	0.214	0.014	0.715	-1.083	0.747	0.209	0.421	3.838	2.900	0.143	1.806
Num. of Siblings	0.010	0.037	0.035	0.136	0.078	0.135	-0.038	0.071	0.505	0.401	-0.039	0.326
Mother's HGC	0.041	0.050	0.256	0.189	0.350	0.244	0.237	0.116	1.508	1.173	0.082	0.352
Father's HGC	-0.014	0.040	-0.129	0.167	-0.048	0.154	-0.036	0.080	-1.082	0.775	0.147	0.330
Fam. Income (1979)	-0.017	0.013	0.116	0.089	-0.077	0.048	-0.037	0.036	0.258	0.155	-0.001	0.052
constant	-0.091	0.771	-1.638	2.818	-0.555	3.219	-1.351	1.584	-32.861	13518.193	-9.638	18020.708
Northeast 30	0.388	0.337	-1.020	1.178	-0.152	0.911	1.417	0.796	5.911	9437.820	-0.781	1.884
South 30	0.148	0.279	-0.877	1.240	-0.478	0.801	0.729	0.583	8.484	2222.587	0.845	2.384
West 30	0.560	0.404	0.119	1.293	-0.752	1.059	0.332	1.148	15.053	2222.594	-5.496	4024.836
Urban 30	-0.285	0.280	0.007	0.841	-0.470	0.985	-1.129	0.507	9.523	13334.221	6.476	18020.707
Cognitive Factor	-0.157	0.149	-2.736	2.133	2.341	1.885	0.978	0.330	-1.445	1.233	-0.287	0.698
Socioemotional Factor	-0.340	0.193	1.445	1.578	-0.476	0.785	0.772	0.467	-0.715	1.579	-2.451	2.917
N	207		40		34		76		30		27	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary models for daily smoking (age 30) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 83: Outcome Model: Heavy Drinking (Age 30) (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Gra	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std
Broken Home	-0.386	0.265	-242.342	82596.032	0.354	0.868	-0.176	0.442	-1.383	1.795	-12.571	1535
Num. of Siblings	0.040	0.042	11.360	8055.132	0.088	0.130	0.037	0.071	-0.010	0.285	0.125	4137
Mother's HGC	-0.009	0.063	0.781	28378.663	0.228	0.226	-0.114	0.115	0.424	0.678	0.185	5032
Father's HGC	-0.012	0.045	-49.818	37399.311	-0.194	0.244	0.042	0.081	0.166	0.672	0.057	2623
Fam. Income (1979)	-0.031	0.018	-2.392	7463.366	-0.074	0.051	-0.059	0.040	-0.193	0.270	-0.026	677
constant	-0.614	0.850	-21.755	226124.304	-1.322	3.314	0.598	1.468	-15.669	111122.011	-8.593	7668
Northeast 30	-0.082	0.400	-189.031	172899.672	0.338	1.107	-0.112	0.818	-1.115	86297.281	12.067	1169
South 30	-0.243	0.323	-228.006	80003.652	0.644	0.834	-0.287	0.594	4.388	48144.220	-0.257	1109
West 30	-0.923	0.660	-23.619	55448257.014	-6.051	3021.000	-4.554	3563.448	0.831	48190.785	0.070	1308
Urban 30	0.414	0.381	443.270	297332.427	0.620	1.264	-0.105	0.536	5.117	100151.113	-0.172	1845
Cognitive Factor	-0.139	0.207	0.658	3645.498	0.033	1.563	0.124	0.348	-1.723	3.237	0.001	4637
Socioemotional Factor	-0.561	0.253	-341.243	225418.607	0.603	1.150	-0.429	0.422	-1.068	3.195	0.001	6353
N	205		40		31		82		29		23	

Notes: The numbers in this table represents the estimated coefficients and standard errors associated with binary models of daily smoking (age 30) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 84: Outcome Model: Obesity (Age 40) (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.040	0.206	0.336	0.745	-1.167	1.440	0.100	0.348	-0.515	0.715	-115.079	0.000
Num. of Siblings	-0.025	0.035	-0.183	0.106	0.076	0.237	-0.001	0.055	0.165	0.141	15.561	0.000
Mother's HGC	0.055	0.051	-0.096	0.154	-0.032	0.305	-0.026	0.094	-0.523	0.470	29.930	0.000
Father's HGC	-0.010	0.038	0.186	0.128	0.237	0.370	-0.009	0.063	0.439	0.301	-4.411	0.000
Fam. Income (1979)	0.007	0.012	-0.012	0.065	-0.019	0.050	0.006	0.028	0.044	0.054	1.613	0.000
constant	-0.773	0.705	-0.814	2.408	-1.130	5.097	-0.053	1.217	2.665	5.042	-473.635	0.000
Northeast 40	0.032	0.341	0.061	0.884	1.759	2.098	0.420	0.637	6.687	10651.104	-54.040	0.000
South 40	0.144	0.270	1.184	0.968	0.404	1.213	0.023	0.491	-1.138	1.922	101.779	0.000
West 40	0.190	0.404	-0.071	1.213	1.091	1.399	1.407	0.893	-10.694	5790.504	-2.313	0.000
Urban 40	-0.166	0.222	-0.921	0.710	-0.936	1.543	-0.306	0.352	-0.747	0.839	84.575	0.000
Cognitive Factor	0.010	0.146	-0.686	0.901	-0.487	1.413	-0.264	0.267	-0.104	0.668	-18.324	0.000
Socioemotional Factor	0.323	0.193	0.421	0.936	3.120	4.084	0.104	0.348	-1.266	1.509	-0.300	0.000
N	214		43		35		84		29		23	

Notes: Obesity has been more precisely defined as a BMI of 30 and above. The numbers in this table represents the estimated coefficients and standard errors associated with binary models of obesity (age 40) on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 85: Outcome Model: Physical Health at Age 40 (PCS-12) (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.111	0.151	-0.292	0.487	0.809	0.371	0.200	0.186	-0.297	0.407	0.584	0.159
Num. of Siblings	-0.027	0.025	-0.045	0.073	-0.006	0.065	-0.033	0.029	-0.001	0.066	-0.124	0.032
Mother's HGC	0.036	0.037	-0.068	0.095	-0.007	0.102	0.055	0.048	0.088	0.179	0.017	0.049
Father's HGC	-0.046	0.027	0.021	0.074	-0.067	0.064	-0.054	0.035	0.014	0.103	-0.140	0.032
Fam. Income (1979)	0.025	0.009	0.034	0.042	0.038	0.019	0.014	0.015	0.029	0.024	0.029	0.007
constant	-0.573	0.514	-1.034	1.566	0.675	1.664	-0.067	0.651	-2.528	2.197	0.283	0.696
Northeast 40	0.013	0.238	1.031	0.533	-0.754	0.532	0.001	0.331	0.331	1.079	0.595	0.263
South 40	0.147	0.193	0.927	0.524	-0.124	0.401	-0.138	0.259	-0.137	0.713	0.460	0.224
West 40	-0.310	0.290	0.495	0.733	-0.875	0.547	-0.592	0.439	-0.099	1.034	0.293	0.321
Urban 40	0.317	0.164	0.297	0.518	-0.439	0.404	0.178	0.190	1.210	0.432	0.569	0.199
Cognitive Factor	0.092	0.109	0.884	0.738	0.942	0.614	0.069	0.137	0.092	0.300	-0.233	0.075
Socioemotional Factor	-0.143	0.138	-1.085	0.640	-0.234	0.418	-0.278	0.190	0.402	0.473	0.596	0.175
1/Precision	0.969	0.046	1.095	0.162	0.845	0.103	0.705	0.055	0.912	0.118	0.209	0.052
N	226		47		37		88		31		23	

Notes: The PCS-12 scale is the Physical Component Summary (measures physical health) obtained from SF-12. SF-12 is a 12-question health survey designed by John Ware of the New England Medical Center Hospital (Ware, Kosinski, and Keller, 1996). The MCS-12 is designed to provide a measure of the respondent's mental and physical health irrespective of their proclivity to use formal health services. Respondents with a score above (below) 50 have better (worse) health than the typical person in the general U.S. population. Each one-point difference above or below 50 corresponds to a one-tenth of a standard deviation. For example, a person with a score of 30 is two standard deviations away from the mean. We standardized the SF-12 score to have mean zero and variance one in the overall population.

H.4 Models for Mental Health Outcomes

Table 86: Outcome Model: Mental Health at Age 40 (MCS-12) (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.424	0.163	-0.932	0.536	-0.436	0.249	-0.176	0.264	-0.625	0.467	-0.121	0.192
Num. of Siblings	0.008	0.027	-0.126	0.081	0.049	0.044	0.031	0.042	0.005	0.073	-0.020	0.038
Mother's HGC	-0.003	0.040	0.064	0.103	-0.053	0.068	-0.043	0.069	-0.025	0.205	-0.007	0.057
Father's HGC	0.003	0.030	-0.152	0.079	0.044	0.043	0.052	0.049	0.043	0.114	-0.053	0.041
Fam. Income (1979)	0.012	0.010	-0.047	0.048	0.006	0.013	0.027	0.021	-0.001	0.025	0.010	0.008
constant	-0.152	0.556	2.222	1.827	0.014	1.110	-0.331	0.924	-0.165	2.843	1.871	0.826
Northeast 40	0.370	0.258	0.659	0.582	0.235	0.358	0.313	0.470	0.721	1.222	-0.095	0.361
South 40	0.220	0.209	0.089	0.572	0.081	0.269	0.176	0.368	0.297	0.785	-0.267	0.269
West 40	-0.466	0.314	-0.502	0.776	-0.060	0.366	-1.090	0.622	-0.837	1.147	-0.190	0.401
Urban 40	0.158	0.178	0.362	0.562	0.418	0.270	-0.120	0.271	0.269	0.461	-0.423	0.215
Cognitive Factor	0.090	0.119	0.156	0.874	0.087	0.385	0.120	0.196	0.039	0.327	-0.049	0.090
Socioemotional Factor	0.106	0.155	1.132	1.002	0.043	0.325	0.141	0.247	-0.210	0.806	-0.335	0.302
1/Precision	1.050	0.049	1.205	0.233	0.576	0.067	1.010	0.076	0.975	0.127	0.313	0.059
N	226		47		37		88		31		23	

Notes: The MCS-12 scale is the Mental Component Summary (measures mental health) obtained from SF-12. SF-12 is a 12-question health survey designed by John Ware of the New England Medical Center Hospital (Ware, Kosinski, and Keller, 1996). The MCS-12 is designed to provide a measure of the respondent's mental and physical health irrespective of their proclivity to use formal health services. Respondents with a score above (below) 50 have better (worse) health than the typical person in the general U.S. population. Each one-point difference above or below 50 corresponds to a one-tenth of a standard deviation. For example, a person with a score of 30 is two standard deviations away from the mean. We standardized the SF-12 score to have mean zero and variance one in the overall population.

Table 87: Outcome Model: The Center for Epidemiologic Studies Depression Scale (CES-D) (Age 40) (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.305	0.162	-1.075	0.430	0.115	0.316	-0.173	0.272	-0.263	0.353	0.214	0.249
Num. of Siblings	-0.059	0.027	-0.142	0.063	-0.042	0.056	-0.083	0.043	-0.069	0.056	0.000	0.049
Mother's HGC	0.021	0.039	0.042	0.081	-0.112	0.087	0.046	0.070	-0.052	0.149	-0.056	0.072
Father's HGC	0.015	0.029	-0.118	0.062	0.069	0.058	0.043	0.050	-0.018	0.087	0.041	0.052
Fam. Income (1979)	0.007	0.010	-0.026	0.037	0.025	0.016	-0.013	0.022	-0.004	0.020	-0.002	0.010
constant	-0.310	0.550	1.727	1.396	0.997	1.409	-0.887	0.951	1.621	1.865	1.868	1.062
Northeast 40	0.173	0.257	0.809	0.460	-0.060	0.453	0.293	0.499	-0.489	0.908	-0.521	0.432
South 40	0.017	0.207	-0.137	0.450	-0.190	0.340	0.489	0.379	-0.659	0.590	-0.671	0.346
West 40	-0.773	0.310	-1.713	0.621	-0.424	0.470	0.139	0.643	-1.743	0.868	-0.271	0.511
Urban 40	0.237	0.175	0.641	0.447	-0.501	0.346	0.272	0.274	0.244	0.358	-0.435	0.272
Cognitive Factor	0.195	0.118	0.603	0.656	0.565	0.503	0.231	0.203	0.074	0.252	-0.268	0.116
Socioemotional Factor	-0.080	0.150	0.428	0.734	-0.432	0.509	0.157	0.250	-0.827	0.425	-0.247	0.331
1/Precision	1.039	0.049	1.001	0.123	0.706	0.106	1.041	0.079	0.731	0.113	0.415	0.064
N	226		47		37		88		31		23	

Notes: CES-D is one of the most common screening tests for helping an individual to determine his or her depression quotient. This scale measures symptoms of depression, discriminates between clinically depressed individuals and others, and is highly correlated with other depression rating scales (see Radloff, 1977; Ross and Mirowsky, 1989). We form the scale summing the scores from the items: "I did not feel like eating; my appetite was poor", "I had trouble keeping my mind on what I was doing", "I felt depressed", "I felt that everything I did was an effort", "My sleep was restless", "I felt sad" and "I could not get *going*". For each items the potential answers are: "0 Rarely/None of the time/1 Day", "1 Some/A little of the time/1-2 Days", "2 Occasionally/Moderate amount of the time/3-4 Days", "3 Most/All of the time/5-7 Days". We standardized the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the models of CES-D for the set of controls presented in rows. Each column contains the results obtained for a particular schooling level. The CES-D index is scaled so larger numbers are beneficial outcomes (less depression).

Table 88: Outcome Model: Pearlin's "Personal Mastery Scale" (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	-0.109	0.149	-0.604	0.404	-0.427	0.281	0.200	0.246	-0.069	0.367	-0.198	0.399
Num. of Siblings	0.004	0.024	0.015	0.066	0.020	0.052	0.038	0.039	0.001	0.059	0.003	0.071
Mother's HGC	0.024	0.034	0.017	0.081	0.040	0.082	-0.081	0.060	0.292	0.143	0.099	0.076
Father's HGC	0.008	0.027	-0.049	0.075	0.060	0.054	0.048	0.042	-0.006	0.078	-0.102	0.072
Fam. Income (1979)	0.006	0.008	-0.046	0.036	0.001	0.015	0.033	0.019	0.008	0.020	0.012	0.013
constant	-0.341	0.496	0.912	1.518	0.222	1.334	-0.023	0.807	-4.377	1.727	1.078	1.241
Northeast 30	-0.131	0.223	0.264	0.474	-0.145	0.403	-0.590	0.432	1.606	0.859	0.289	0.487
South 30	-0.333	0.179	-0.270	0.468	-0.575	0.322	-0.688	0.319	0.761	0.467	-0.086	0.427
West 30	-0.294	0.275	-0.524	0.638	-1.169	0.408	0.497	0.634	1.135	0.724	-0.086	0.600
Urban 30	0.145	0.191	0.322	0.423	-0.386	0.366	0.194	0.288	0.270	0.501	-1.392	0.802
Cognitive Factor	0.344	0.105	0.813	0.595	0.691	0.416	0.414	0.188	0.497	0.236	0.068	0.189
Socioemotional Factor	0.154	0.127	0.216	0.637	0.753	0.343	-0.083	0.234	0.166	0.399	1.039	0.418
1/Precision	0.988	0.044	1.031	0.109	0.648	0.098	0.943	0.069	0.883	0.104	0.606	0.117
N	252		49		41		95		37		30	

Notes: Pearlins "Personal Mastery Scale" consists of 7 items which are answered on a 4-point (4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree) scale and has been shown to exhibit reasonable internal reliability and good construct validity (Pearlin and Schooler, 1978; Pearlin, Menaghan, Lieberman, and Mullan, 1981). The items are "there is really no way i can solve some of the problems i have", "sometimes i feel that i'm being pushed around in life" , "i have little control over the things that happen to me", "i can do just about anything i really set my mind to", "i often feel helpless in dealing with the problems of life", "what happens to me in the future mostly depends on me", "there is little i can do to change many of the important things in my life". We form the scale summing the scores from the items, and standardizing the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the models for the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

Table 89: Outcome Model: Rosenberg's Self-Esteem Scale (black males)

Variables	All		HSDropout		GED		HS Grad.		Some College		College Grad.	
	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.	β	Std Err.
Broken Home	0.162	0.152	-0.011	0.435	-0.116	0.316	0.295	0.240	0.565	0.282	0.566	0.380
Num. of Siblings	-0.001	0.025	0.002	0.063	0.034	0.058	0.013	0.038	0.066	0.051	0.024	0.076
Mother's HGC	-0.031	0.037	-0.105	0.088	-0.093	0.091	-0.023	0.063	-0.015	0.128	-0.052	0.126
Father's HGC	0.057	0.028	0.054	0.060	0.213	0.072	0.061	0.043	0.004	0.076	-0.003	0.087
Fam. Income (1979)	0.021	0.009	0.017	0.037	0.020	0.020	0.027	0.019	0.018	0.016	0.014	0.016
constant	-0.767	0.516	0.841	1.327	-0.630	1.742	-1.470	0.844	-0.574	1.503	-0.240	1.882
Northeast 40	-0.226	0.249	-1.446	0.523	0.176	0.456	0.507	0.420	1.021	0.761	0.091	0.860
South 40	-0.040	0.201	-0.449	0.502	-0.421	0.386	0.407	0.331	0.126	0.492	-0.072	0.609
West 40	-0.569	0.293	-1.874	0.624	-0.691	0.474	0.374	0.557	-0.856	0.741	1.287	0.904
Urban 40	0.328	0.165	0.677	0.432	-0.118	0.377	0.020	0.245	0.548	0.341	0.309	0.432
Cognitive Factor	0.341	0.107	0.857	0.610	0.887	0.514	0.369	0.177	0.445	0.210	0.195	0.182
Socioemotional Factor	0.097	0.139	0.662	0.677	0.526	0.413	0.224	0.228	-0.547	0.320	0.834	0.591
1/Precision	0.934	0.046	0.890	0.146	0.636	0.100	0.897	0.070	0.606	0.086	0.604	0.129
N	206		38		31		85		30		22	

Notes: Rosenberg's Self-Esteem Scale consists of 11 items which are answered on a 4-point (4 strongly agree, 3 agree, 2 disagree, 1 strongly disagree). The items are "I feel that I'm a person of worth, at least on equal basis with others", "I feel that I have a number of good qualities" , "All in all, I am inclined to feel that I am a failure", "I am able to do things as well as most other people", "I feel I do not have much to be proud of", "I take a positive attitude toward myself", "On the whole, I am satisfied with myself", "I wish I could have more respect for myself" , "I certainly feel useless at times", "At times I think I am no good at all". We form the scale summing the scores from the items, and standardizing the scores to have mean 0 and variance 1 in the overall population. The numbers in this table represents the estimated coefficients and standard errors associated with the linear regression models on the set of controls presented in rows. Each column contains the results obtained for a particular schooling level.

I Estimating the Number of Factors

I.1 Exploratory Factor Analysis

Tables 90 and 91 present results from exploratory factor analysis on the full set of cognitive and socioemotional measures we considered in the NLSY79 including our five measures of risky behavior. The measures include four early risky measures, a violent behavior measure, a reckless behavior measure, 6 ASVAB tests, and four 9th-grade GPAs. All measurements are adjusted for the control variables listed in the table footnotes. As shown in Table 90, principal component factor analysis finds three factors using a scree plot test. As a more robust alternative, we also implement Horn's test (Horn, 1965). As shown in Table 91, Horn's test finds 2 factors for principal component factor analysis. These exploratory results support the use of two factors, but with a marginal support for three factors from the scree plot test. In the next section, various three-factor models are estimated as a robustness check for the results reported in the main paper.

Table 90: Testing the Number of Factors: Results from Eigenvalue or Scree Plot Test

Factor	Eigenvalue	Difference	Proportion	Cumulative
1	4.160	1.902	0.378	0.378
2	2.257	1.251	0.205	0.583
3	1.005	0.253	0.091	0.674
4	0.752	0.040	0.068	0.743
5	0.712	0.169	0.064	0.808
6	0.542	0.071	0.049	0.857
7	0.471	0.119	0.042	0.900
8	0.352	0.084	0.032	0.932
9	0.268	0.007	0.024	0.956
10	0.260	0.044	0.023	0.980
11	0.215		0.019	1.000

Notes: All measures are adjusted for race, parent's education, family income, urban status and region in 1980, age in 1980, and age squared. Results are from an exploratory principal component factor analysis. Criterion: Retain factors with eigenvalues greater than 1. Measures include four early risky measures, a violent behavior measure, a reckless behavior measure, 6 ASVAB tests, and four 9th-grade GPAs.

Table 91: Testing the Number of Factors: Results from Horn's Test

Factor	Adjusted-Eigen	Eigenvalue
1	3.061	4.160
2	1.175	2.257
3	-.064	1.005
4	-.283	.752
5	-.303	.712
6	-.457	.542
7	-.513	.471
8	-.619	.352
9	-.670	.268
10	-.664	.260
11	-.660	.215

Notes: All measures are adjusted for race, parent's education, family income, urban status and region in 1980, age in 1980, and age squared. Results are from Horn's parallel analysis on principal component factor analysis. Criterion: Retain factors > 0. Measures include six subtests of ASVAB, GPA in 9th grade in math, language, social studies, and science, and early reckless behavior.

I.2 Robustness check: Three-factor models

Given the weak evidence for a third factor in exploratory factor analysis, models with an additional factor are estimated to check the robustness of our results to more general specifications. Three different three-factor models are considered. Since estimating three factors as opposed to two is computationally costly, we simplify the model along two dimensions. First, we assume a normal distribution for the factors rather than a mixture of normals. We compare a computationally simplified two-factor model with a computationally simplified three-factor model, which are comparable. We also compare the full two-factor model used in the paper with the computationally simplified two-factor model and find that the results are not very different. Second, the factor distributions are integrated using 8 quadrature points rather than 16 points. Finally, we rotate the factor system and restrict the factors to be uncorrelated. Estimates of the two-factor model with these simplifications are very close to the estimates from the full model used in the paper.

Three alternative models are considered. The first model adds an additional socioemotional factor, the second model adds an additional cognitive factor, and the third model adds an additional adult outcome factor assumed to be independent of the cognitive and socioemotional factors. Estimates of the treatment effects for each model are compared to the two-factor model presented in the paper. To understand whether the size of the differences in treatment effects are important, we compare the differences in the treatment effects to the standard error of the TE from the main two-factor model. We use the standard error as a metric since differences that are less than a standard error are statistically indistinguishable from our results.

Sections I.2.2, I.2.3, and I.2.4 compare the alternate three-factor models with the simplified two-factor model. Most of the differences are less than one standard error away from the simplified two-factor model. We first compare our main two factor model to the simplified 2-factor model (single mixture, 8 quadrature points). We then compare this simplified 2-factor model to a simplified 3-factor model (where the 3rd factor is selected in one of the three ways described above). Comparing the full 2-factor model to the simplified 2-factor model, and then the simplified 2-factor model to the full model is the logical sequence of comparisons. The largest difference is 1.19 standard errors away from the two-factor estimates. We conclude that if there are any differences in the treatment effects from including a third factor, they are not observable given the standard errors on the measurements.

I.2.1 Comparing the simplified two-factor model to the full two-factor model

First, we compare the treatment effects from the simplified two-factor model to those from the full two-factor model. The largest deviation is 0.85 standard errors from the full model, where more than 85% of the estimates are less than a third of a standard error away from the full model. The simplified model is a good approximation of the full model.

Table 92: Node-specific Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	0.14	0.14	0.13	0.13	-0.27
HS Dropout–GED	-0.18	0.04	-0.04	0.10	0.22
HS Graduate–Enroll College	0.18	0.27	0.41	0.05	0.85
Enroll College–4-yr College Grad	0.34	-0.10	-0.23	0.13	-0.23

Notes: Comparison of the TE from the computationally simplified model and our main model. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{simplified} - TE_{main})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the main model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 93: Node-specific Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	0.20	0.20	0.19	0.11	0.07
HS Dropout–GED	0.12	0.15	0.25	0.07	0.17
HS Graduate–Enroll College	0.35	0.46	0.41	0.38	0.52
Enroll College–4-yr College Grad	0.27	0.02	-0.04	0.09	0.01

Notes: Comparison of the TE from the computationally simplified model and our main model. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{simplified} - TE_{main})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the main model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 94: Node-specific Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	0.08	0.08	0.05	0.27	0.12
HS Dropout–GED	0.16	0.22	0.23	0.16	0.10
HS Graduate–Enroll College	0.17	0.13	0.13	0.14	0.31
Enroll College–4-yr College Grad	0.06	0.01	0.00	0.02	0.04

Notes: Comparison of the TE from the computationally simplified model and our main model. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{simplified} - TE_{main})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the main model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 95: Final Schooling Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT
HS Dropout–GED	-0.19	0.04	-0.04	0.10
HS Dropout–HS Graduate	-0.23	-0.15	-0.22	0.20
HS Dropout–Some College	-0.10	-0.08	-0.05	-0.07
HS Dropout–4-yr College Grad	0.11	0.06	-0.14	0.53

Notes: Comparison of the TE from the computationally simplified model and our main model. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{simplified} - TE_{main})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the main model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 96: Final Schooling Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.12	0.15	0.25	0.07
HS Dropout–HS Graduate	0.22	0.11	0.10	0.08
HS Dropout–Some College	0.36	0.41	0.47	0.02
HS Dropout–4-yr College Grad	0.50	0.51	0.33	0.45

Notes: Comparison of the TE from the computationally simplified model and our main model. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{simplified} - TE_{main})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the main model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 97: Final Schooling Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.16	0.22	0.23	0.16
HS Dropout–HS Graduate	0.17	0.17	0.14	0.19
HS Dropout–Some College	0.25	0.25	0.22	0.19
HS Dropout–4-yr College Grad	0.26	0.25	0.25	0.21

Notes: Comparison of the TE from the computationally simplified model and our main model. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{simplified} - TE_{main})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the main model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

I.2.2 MODEL I: Comparing treatment effects after adding an additional cognitive factor

We include a third factor that loads only on the early risky behavior outcomes (smoking—cigarettes and marijuana, drinking, and intercourse before age 15). The measurement system consists of the ASVAB tests (loading on cognitive ability only), school grades (loading on cognitive ability and first socioemotional factor), and early risky behaviors (loading on cognitive ability and both socioemotional factors). All three factors are included in the models for education and outcomes. The cognitive, first socioemotional and second socioemotional factors have loadings normalized for the ASVAB arithmetic reasoning subscore (1.0), 9th grade language grade (1.0) and early intercourse (-1.0), respectively.

Most of the differences are less than one standard error away from the simplified two-factor model. The largest difference is 1.15 standard errors away from the two-factor estimates. We conclude that if there are any differences in the treatment effects from including a third cognitive factor, they are not observable given the standard errors on the measurements.

Table 98: Node-specific Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	-0.12	-0.12	-0.08	-0.31	0.28
HS Dropout–GED	0.42	-0.09	0.35	-0.41	-0.08
HS Graduate–Enroll College	0.16	0.02	-0.35	0.43	-0.47
Enroll College–4-yr College Grad	0.17	0.30	0.27	0.30	0.19

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 99: Node-specific Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	0.35	0.35	0.34	0.16	0.01
HS Dropout–GED	0.70	0.44	0.75	0.20	0.50
HS Graduate–Enroll College	-0.09	-0.20	-0.36	0.05	0.07
Enroll College–4-yr College Grad	0.35	0.35	0.10	0.49	0.61

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 100: Node-specific Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	-0.29	-0.29	-0.24	-0.36	-0.28
HS Dropout–GED	-0.48	-0.55	-0.67	-0.29	-0.43
HS Graduate–Enroll College	-0.03	-0.03	-0.16	0.08	0.02
Enroll College–4-yr College Grad	0.46	0.24	-0.03	0.45	0.00

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 101: Final Schooling Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.43	-0.09	0.35	-0.41
HS Dropout–HS Graduate	0.66	0.46	0.62	-0.41
HS Dropout–Some College	0.58	0.59	0.58	0.24
HS Dropout–4-yr College Grad	0.64	0.53	0.56	0.11

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 102: Final Schooling Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.70	0.44	0.75	0.20
HS Dropout–HS Graduate	1.04	1.15	1.09	0.19
HS Dropout–Some College	0.96	0.96	0.91	0.35
HS Dropout–4-yr College Grad	1.09	0.95	0.81	0.44

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 103: Final Schooling Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT
HS Dropout–GED	-0.48	-0.55	-0.67	-0.29
HS Dropout–HS Graduate	-0.65	-0.66	-0.61	-0.27
HS Dropout–Some College	-0.71	-0.63	-0.69	-0.11
HS Dropout–4-yr College Grad	-0.22	-0.50	-0.78	0.42

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

I.2.3 MODEL II: Comparing treatment effects after adding an additional socioemotional factor

We include a third factor that loads only on the verbal subtests of the ASVAB. The measurement system consists of the two verbal ASVAB tests (loading on one cognitive factor), the four mathematical ASVAB tests (loading on both cognitive factors), and the school grades (loading on both cognitive factors and the socioemotional factor). All three factors are included in the models for education and outcomes. The first cognitive, second cognitive and socioemotional factors have loadings normalized to 1.0 for the ASVAB paragraph comprehension subscore, ASVAB arithmetic reasoning subscore and 9th grade language grade, respectively. We rotate the factors so that they are uncorrelated.

Most of the differences are less than one standard error away from the simplified two-factor model. The largest difference is 1.13 standard errors away from the two-factor estimates. We conclude that if there are any differences in the treatment effects from including a third socioemotional factor, they are not observable given the standard errors on the measurements.

Table 104: Node-specific Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	-0.16	-0.16	-0.21	0.36	0.86
HS Dropout–GED	0.23	0.03	-0.02	0.06	0.06
HS Graduate–Enroll College	0.13	0.11	0.08	0.11	-0.39
Enroll College–4-yr College Grad	-0.17	0.20	0.41	-0.16	0.35

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 105: Node-specific Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	-0.81	-0.81	-0.71	-1.02	-1.13
HS Dropout–GED	0.60	0.02	0.05	0.00	0.00
HS Graduate–Enroll College	0.05	-0.17	-0.23	-0.05	-0.11
Enroll College–4-yr College Grad	-0.24	-0.34	-0.30	-0.27	-0.28

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 106: Node-specific Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	-0.32	-0.32	-0.27	-0.39	-0.15
HS Dropout–GED	0.14	0.00	0.01	0.00	0.11
HS Graduate–Enroll College	0.05	-0.10	-0.17	-0.02	-0.12
Enroll College–4-yr College Grad	-0.20	0.00	0.16	-0.19	-0.03

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 107: Final Schooling Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.24	0.03	-0.02	0.06
HS Dropout–HS Graduate	0.07	0.11	0.08	0.19
HS Dropout–Some College	0.04	0.12	-0.00	0.23
HS Dropout–4-yr College Grad	-0.06	-0.04	0.06	-0.23

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 108: Final Schooling Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.60	0.02	0.05	0.00
HS Dropout–HS Graduate	0.03	-0.09	0.07	-0.87
HS Dropout–Some College	0.11	-0.00	0.11	-0.22
HS Dropout–4-yr College Grad	-0.05	0.02	0.14	-0.28

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 109: Final Schooling Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.14	0.00	0.01	0.00
HS Dropout–HS Graduate	-0.07	-0.15	-0.09	-0.37
HS Dropout–Some College	-0.07	0.02	-0.04	0.13
HS Dropout–4-yr College Grad	-0.21	-0.17	-0.08	-0.24

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

I.2.4 MODEL III: Comparing treatment effects after adding an additional factor in adult outcomes.

We include a third factor in labor market outcomes. In this case, the model is estimated in one stage. The measurement system consists of ASVAB tests (loading on cognitive ability only), school grades (loading on cognitive ability and the socioemotional factor), and adult outcomes (loading on all three factors). The cognitive ability and socioemotional factors are included in the education model, but the additional adult factor is not. The cognitive, socioemotional and labor market factors have loadings normalized to 1.0 for the ASVAB arithmetic reasoning subscore, 9th grade language grade and wages, respectively.

Most of the differences are less than one standard error away from the simplified two-factor model. The largest difference is 1.19 standard errors away from the two-factor estimates. This is the same for all factors. We conclude that if there are any differences in the treatment effects from including a third labor-market factor, they are not observable given the standard errors on the measurements.

Table 110: Node-specific Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	0.36	0.36	0.23	1.06	1.19
HS Dropout–GED	-0.94	-0.80	-0.86	-0.64	-1.01
HS Graduate–Enroll College	0.64	0.69	0.45	0.80	0.36
Enroll College–4-yr College Grad	-0.57	-0.61	-0.49	-0.73	-0.29

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 111: Node-specific Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	0.28	0.28	0.29	0.08	0.04
HS Dropout–GED	0.06	-0.06	-0.10	-0.03	-0.11
HS Graduate–Enroll College	0.44	0.46	0.33	0.47	0.50
Enroll College–4-yr College Grad	-0.92	-0.75	-0.48	-0.81	-0.67

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 112: Node-specific Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT	AMTE
HS Dropout–HS Graduate	0.02	0.02	0.02	0.03	0.12
HS Dropout–GED	-0.04	-0.36	-0.22	-0.46	-0.41
HS Graduate–Enroll College	-0.01	0.01	0.03	-0.02	-0.07
Enroll College–4-yr College Grad	-0.21	-0.14	-0.08	-0.15	-0.17

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 113: Final Schooling Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT
HS Dropout–GED	-0.95	-0.80	-0.86	-0.64
HS Dropout–HS Graduate	-0.85	-0.48	-0.70	0.69
HS Dropout–Some College	-0.35	-0.10	-0.54	0.62
HS Dropout–4-yr College Grad	-0.67	-0.86	-1.06	0.25

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 114: Final Schooling Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT
HS Dropout–GED	0.06	-0.06	-0.10	-0.03
HS Dropout–HS Graduate	0.21	0.17	0.19	-0.10
HS Dropout–Some College	0.53	0.52	0.46	0.33
HS Dropout–4-yr College Grad	-0.11	0.02	0.27	-0.57

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 115: Final Schooling Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT
HS Dropout–GED	-0.04	-0.36	-0.22	-0.46
HS Dropout–HS Graduate	0.04	0.00	0.03	-0.16
HS Dropout–Some College	0.07	0.04	0.10	-0.09
HS Dropout–4-yr College Grad	-0.11	-0.07	0.06	-0.29

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

I.2.5 MODEL IV: Comparing treatment effects after adding an additional factor in adult outcomes and educational decisions

We include a third factor that loads on wage outcomes and educational decisions. In this case, the model is estimated in one stage. The measurement system consists of ASVAB tests (loading on cognitive ability only), school grades (loading on cognitive ability and the socioemotional factor), and adult outcomes (loading on all three factors). All three factors are included in the education model. The cognitive, socioemotional and third factor have loadings normalized to 1.0 for the ASVAB arithmetic reasoning subscore, 9th grade language grade and high school graduation, respectively.

Most of the differences are less than one standard error away from the simplified two-factor model. The node-specific choice to enroll in college on wages and present value of wages are exceptions with with differences larger than 3 standard errors away. These large differences only appear in the node-specific results for this specific node and only for these two outcomes. It may be that our enroll in college decision is not properly specified, mixing those who begin 4-year degrees but do not finish with those who enroll and obtain 2-year degrees. We conclude that, if there are any differences in the treatment effects from including a third labor-market factor, they are, for the most part, not observable given the standard errors on the measurements.

Table 116: Node-specific Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout-HS Graduate	0.02	0.02	0.11	-0.65	-0.88
HS Dropout-GED	-0.17	0.33	-0.04	0.59	0.09
HS Graduate-Enroll College	3.33	3.92	3.43	3.51	3.77
Enroll College-4-yr College Grad	1.09	0.45	0.09	0.95	0.95

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model ($(TE_{3fac} - TE_{2fac})/\sigma_{TE}$), where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 117: Node-specific Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT	AMTE
HS Dropout-HS Graduate	-0.04	-0.04	0.05	-0.61	-1.03
HS Dropout-GED	0.31	0.53	0.34	0.62	0.59
HS Graduate-Enroll College	2.02	2.50	2.13	2.20	2.46
Enroll College-4-yr College Grad	0.13	0.16	0.08	0.16	0.28

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 118: Node-specific Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT	AMTE
HS Dropout-HS Graduate	0.15	0.15	0.18	-0.18	-0.15
HS Dropout-GED	-0.61	-0.27	-0.45	-0.00	-0.19
HS Graduate-Enroll College	0.03	0.10	0.05	0.10	0.01
Enroll College-4-yr College Grad	-0.08	-0.12	-0.09	-0.14	-0.21

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 119: Final Schooling Treatment Effect Comparison: wage

	ATE*	ATE	TT	TUT
HS Dropout-GED	-0.17	0.33	-0.04	0.59
HS Dropout-HS Graduate	-1.09	-1.05	-1.04	-0.66
HS Dropout-Some College	0.32	0.37	0.23	0.35
HS Dropout-4-yr College Grad	0.96	0.82	0.24	1.56

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 120: Final Schooling Treatment Effect Comparison: PVwage

	ATE*	ATE	TT	TUT
HS Dropout-GED	0.31	0.53	0.34	0.62
HS Dropout-HS Graduate	-0.22	-0.26	-0.20	-0.52
HS Dropout-Some College	0.56	0.63	0.47	0.51
HS Dropout-4-yr College Grad	0.58	0.59	0.52	0.32

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

Table 121: Final Schooling Treatment Effect Comparison: whitecollar

	ATE*	ATE	TT	TUT
HS Dropout-GED	-0.61	-0.27	-0.45	-0.00
HS Dropout-HS Graduate	-0.58	-0.52	-0.48	-0.25
HS Dropout-Some College	-0.59	-0.57	-0.61	-0.17
HS Dropout-4-yr College Grad	-0.54	-0.72	-0.75	-0.35

Notes: Comparison of the treatment effects (TE) from the three- and two-factor models. The numbers reported are the difference in TE divided by the standard error of the TE for the two-factor model $((TE_{3fac} - TE_{2fac})/\sigma_{TE})$, where σ_{TE} is the standard error of the TE in the two-factor model. ATE* is the average treatment effect evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node.

J Treatment Effects: Comparing Outcomes for Different Final Schooling Levels

We now compare the outcomes from a particular schooling level with those associated with the high school dropout status, using the main model reported in the text. In other words, we use HS dropouts as our baseline comparison group. For each of the outcomes, the numbers under the column "Observed" display the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level s relative to the HS dropout status. ATE is computed using the overall population. The column "TT" displays the average treatment effects associated with a particular schooling level s relative to the HS dropout status, but computed from those individuals selecting s as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level s relative to the HS dropout status, but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 122: The Effects of Education on Log Wages, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.17	0.11	0.04	0.06	0.03
		(0.08)	(0.05)	(0.05)	(0.05)
HS Graduate vs. HS Dropout	0.28	0.13*	0.12**	0.12*	0.11**
		(0.06)	(0.04)	(0.05)	(0.04)
Some College vs. HS Dropout	0.54	0.21**	0.21**	0.21**	0.21**
		(0.06)	(0.05)	(0.07)	(0.07)
Four Year College Degree vs. HS Dropout	0.90	0.26**	0.27**	0.34**	0.15**
		(0.07)	(0.07)	(0.10)	(0.07)
Some College vs. HS Graduate		0.08	0.08	0.07	0.10
		(0.04)	(0.05)	(0.04)	(0.09)
Four Year College Degree vs. Some College		0.05	0.07	0.14	-0.06
		(0.05)	(0.05)	(0.06)	(0.09)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 123: The Effects of Education on Log PV of wages, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.18	-0.21*	-0.11	-0.15*	-0.08
		(0.10)	(0.06)	(0.06)	(0.07)
HS Graduate vs. HS Dropout	0.62	-0.03	0.07	-0.00	0.30**
		(0.08)	(0.06)	(0.08)	(0.05)
Some College vs. HS Dropout	0.76	0.04	0.16*	-0.05	0.46**
		(0.08)	(0.07)	(0.10)	(0.08)
Four Year College Degree vs. HS Dropout	1.16	0.10	0.07	-0.08	0.33**
		(0.09)	(0.09)	(0.13)	(0.10)
Some College vs. HS Graduate		0.08	0.10	0.05	0.16
		(0.04)	(0.05)	(0.04)	(0.11)
Four Year College Degree vs. Some College		0.06	0.10	0.22	-0.12
		(0.05)	(0.07)	(0.06)	(0.12)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 124: The Effects of Education on Physical Health (PCS-12), by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.19	-0.19	-0.03	-0.07	0.00
		(0.24)	(0.13)	(0.16)	(0.14)
HS Graduate vs. HS Dropout	0.39	0.08	0.14	0.11	0.23*
		(0.21)	(0.15)	(0.19)	(0.12)
Some College vs. HS Dropout	0.50	0.10	0.13	0.08	0.19
		(0.22)	(0.17)	(0.25)	(0.16)
Four Year College Degree vs. HS Dropout	0.68	0.31	0.28	0.14	0.52**
		(0.21)	(0.23)	(0.35)	(0.11)
Some College vs. HS Graduate		0.02	0.01	0.04	-0.03
		(0.06)	(0.08)	(0.06)	(0.15)
Four Year College Degree vs. Some College		0.22	0.20	0.13	0.33
		(0.10)	(0.09)	(0.09)	(0.22)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 125: The Effects of Education on Mental Health (MCS-12), by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.27	-0.48*	-0.03	-0.08	0.02
		(0.23)	(0.12)	(0.14)	(0.14)
HS Graduate vs. HS Dropout	0.68	-0.18	-0.08	-0.15	0.17
		(0.20)	(0.15)	(0.18)	(0.10)
Some College vs. HS Dropout	0.76	-0.16	-0.07	-0.24	0.19
		(0.20)	(0.15)	(0.24)	(0.14)
Four Year College Degree vs. HS Dropout	1.05	-0.14	-0.21	-0.50	0.32
		(0.21)	(0.23)	(0.38)	(0.19)
Some College vs. HS Graduate		0.03	0.03	0.03	0.02
		(0.06)	(0.07)	(0.05)	(0.12)
Four Year College Degree vs. Some College		0.02	0.00	-0.07	0.13
		(0.09)	(0.08)	(0.07)	(0.19)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 126: The Effects of Education on Depression (CES-D), by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.11	-0.19	0.12	0.03	0.20
		(0.25)	(0.12)	(0.13)	(0.14)
HS Graduate vs. HS Dropout	0.31	-0.07	0.04	-0.05	0.33**
		(0.21)	(0.15)	(0.20)	(0.11)
Some College vs. HS Dropout	0.33	-0.01	0.10	-0.10	0.40**
		(0.20)	(0.16)	(0.25)	(0.13)
Four Year College Degree vs. HS Dropout	0.29	0.18	0.12	-0.23	0.75**
		(0.22)	(0.26)	(0.39)	(0.16)
Some College vs. HS Graduate		0.07	0.06	0.05	0.07
		(0.06)	(0.07)	(0.06)	(0.12)
Four Year College Degree vs. Some College		0.19	0.19	0.10	0.35
		(0.12)	(0.10)	(0.08)	(0.24)

Notes: The depression scale is normalized so that a higher value corresponds to less depressed. Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision. The CES-D index is scaled so larger numbers are beneficial outcomes (less depression).

Table 127: The Effects of Education on Pearlin, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	-0.27	0.59**	0.21*	0.28*	0.14
		(0.23)	(0.11)	(0.13)	(0.12)
HS Graduate vs. HS Dropout	-0.44	0.25	0.24	0.25	0.20**
		(0.21)	(0.16)	(0.19)	(0.09)
Some College vs. HS Dropout	-0.59	0.46**	0.49**	0.43*	0.57**
		(0.23)	(0.18)	(0.26)	(0.15)
Four Year College Degree vs. HS Dropout	-0.68	0.65**	0.61**	0.47	0.88**
		(0.24)	(0.25)	(0.35)	(0.17)
Some College vs. HS Graduate		0.07	0.06	0.05	0.07
		(0.06)	(0.07)	(0.06)	(0.12)
Four Year College Degree vs. Some College		0.19	0.19	0.10	0.35
		(0.12)	(0.10)	(0.08)	(0.24)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 128: The Effects of Education on Self-Esteem (Rosenberg), by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.42	-0.19	-0.07	-0.14	-0.01
		(0.25)	(0.12)	(0.15)	(0.15)
HS Graduate vs. HS Dropout	0.41	-0.15	-0.11	-0.13	-0.05
		(0.22)	(0.15)	(0.19)	(0.09)
Some College vs. HS Dropout	0.76	0.05	0.13	-0.02	0.35*
		(0.21)	(0.18)	(0.26)	(0.17)
Four Year College Degree vs. HS Dropout	0.91	0.26	0.18	-0.10	0.71**
		(0.24)	(0.27)	(0.37)	(0.21)
Some College vs. HS Graduate		0.19	0.25	0.15	0.40
		(0.09)	(0.12)	(0.09)	(0.21)
Four Year College Degree vs. Some College		0.21	0.17	0.07	0.36
		(0.15)	(0.15)	(0.09)	(0.33)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 129: The Effects of Education on Participation, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.25	-0.06	-0.06	-0.07*	-0.06
		(0.04)	(0.03)	(0.03)	(0.05)
HS Graduate vs. HS Dropout	0.34	0.03*	0.04*	0.03	0.09**
		(0.02)	(0.03)	(0.03)	(0.03)
Some College vs. HS Dropout	0.64	0.02	0.04	0.00	0.09*
		(0.03)	(0.03)	(0.03)	(0.04)
Four Year College Degree vs. HS Dropout	0.80	0.00	0.01	-0.01	0.04
		(0.04)	(0.04)	(0.02)	(0.09)
Some College vs. HS Graduate		-0.01	-0.01	-0.01	0.01
		(0.01)	(0.02)	(0.01)	(0.04)
Four Year College Degree vs. Some College		-0.01	-0.01	0.01	-0.06
		(0.03)	(0.03)	(0.02)	(0.09)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 130: The Effects of Education on White Collar, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.11	0.14	0.03	0.06	0.01
		(0.09)	(0.04)	(0.05)	(0.04)
HS Graduate vs. HS Dropout	0.22	0.14*	0.10*	0.12*	0.04
		(0.07)	(0.05)	(0.06)	(0.03)
Some College vs. HS Dropout	0.25	0.27**	0.25**	0.29**	0.18**
		(0.07)	(0.06)	(0.08)	(0.06)
Four Year College Degree vs. HS Dropout	0.26	0.41**	0.46**	0.65**	0.10
		(0.08)	(0.09)	(0.11)	(0.10)
Some College vs. HS Graduate		0.13	0.13	0.13	0.13
		(0.05)	(0.05)	(0.04)	(0.09)
Four Year College Degree vs. Some College		0.14	0.16	0.29	-0.07
		(0.08)	(0.06)	(0.07)	(0.11)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 131: The Effects of Education on Obesity, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	0.05	0.12	0.02	0.05	-0.01
		(0.09)	(0.05)	(0.06)	(0.06)
HS Graduate vs. HS Dropout	0.11	0.15*	0.12*	0.14*	0.08*
		(0.08)	(0.06)	(0.07)	(0.05)
Some College vs. HS Dropout	0.21	0.14*	0.15*	0.15	0.15*
		(0.08)	(0.06)	(0.09)	(0.08)
Four Year College Degree vs. HS Dropout	0.37	0.08	0.07	0.06	0.11
		(0.08)	(0.08)	(0.11)	(0.10)
Some College vs. HS Graduate		-0.00	0.02	-0.02	0.07
		(0.03)	(0.04)	(0.03)	(0.07)
Four Year College Degree vs. Some College		-0.06	-0.07	-0.08	-0.04
		(0.06)	(0.06)	(0.06)	(0.12)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 132: The Effects of Education on Daily Smoking, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	-0.03	0.05	0.01	0.01	0.01
		(0.10)	(0.05)	(0.06)	(0.05)
HS Graduate vs. HS Dropout	0.04	-0.14	-0.18**	-0.15*	-0.25**
		(0.08)	(0.06)	(0.08)	(0.05)
Some College vs. HS Dropout	-0.01	-0.20*	-0.21**	-0.17	-0.27**
		(0.09)	(0.07)	(0.10)	(0.07)
Four Year College Degree vs. HS Dropout	-0.10	-0.35**	-0.34**	-0.32*	-0.38**
		(0.09)	(0.10)	(0.14)	(0.09)
Some College vs. HS Graduate		-0.06	-0.05	-0.07	-0.02
		(0.04)	(0.04)	(0.05)	(0.07)
Four Year College Degree vs. Some College		-0.15	-0.16	-0.18	-0.11
		(0.06)	(0.06)	(0.06)	(0.11)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

Table 133: The Effects of Education on Heavy Drinker, by *Final Schooling Level* using High School Dropouts as Baseline

	Observed	ATE†	ATE	TT	TUT
GED vs. HS Dropout	-0.05	-0.03	-0.07	-0.07	-0.08
		(0.12)	(0.06)	(0.08)	(0.05)
HS Graduate vs. HS Dropout	-0.22	-0.08	-0.07	-0.08	-0.02
		(0.09)	(0.07)	(0.08)	(0.05)
Some College vs. HS Dropout	-0.30	-0.10	-0.07	-0.13	0.00
		(0.10)	(0.08)	(0.11)	(0.08)
Four Year College Degree vs. HS Dropout	-0.43	-0.07	-0.09	-0.22	0.14
		(0.11)	(0.13)	(0.17)	(0.12)
Some College vs. HS Graduate		-0.01	-0.01	-0.03	0.02
		(0.03)	(0.04)	(0.03)	(0.07)
Four Year College Degree vs. Some College		0.03	0.03	-0.03	0.14
		(0.06)	(0.05)	(0.03)	(0.15)

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each row compares the outcomes from a particular schooling level j and the HS dropout status. The column "Observed" displays the observed differences in the data. The column "ATE" displays the average treatment effect obtained from the comparison of the outcomes associated with a particular schooling level j relative to the HS dropout status. ATE† is evaluated over the whole population, whereas ATE is evaluated for everyone who reaches a certain decision node. The column "TT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed from those individuals selecting j as their final schooling decision. Finally, the column "TUT" displays the average treatment effects associated with a particular schooling level j relative to the HS dropout status but computed only for those individuals selecting "HS dropout" as their final schooling decision.

K Treatment Effects: Pairwise Comparing by Decision Node

This section presents estimates of the treatment effects by decision node. Each table presents average effects of education on the outcome of interest. The effects are presented in the different panels in each table. They are defined as the differences in the outcome associated with two schooling levels (not necessarily final or terminal schooling levels). Let Y_i and Y_j denote the outcomes associated with schooling levels i and j, respectively. Many schooling levels provide options to pursue higher schooling levels.

For example, the choice to graduate from high school opens up the possibility of enrolling in college. Let s indicate the level of final schooling, where 0 corresponds to dropping out of high school, 1 to graduating high school, 2 to attaining a GED, 3 to attaining some college, and 4 for graduating college. Let $D_{0,1} = 1$ represent the decision to graduate from high school and $D_{0,2} = 1$ represent the decision to get the GED once an individual has chosen to drop out ($D_{0,1} = 0$). The decision-specific treatment effect from graduating from high school ($D_{0,1} = 1$) can be written as

$$
\begin{aligned}
TE_{0,1}(Y|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}}) &= E(Y|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},Fix\ D_{0,1}=1) - E(Y|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},Fix\ D_{0,1}=0) \\
&= \Pr(s=1|\boldsymbol{X},\boldsymbol{\theta},D_{0,1}=1)\times E(Y_1|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}}) \\
&\quad + \Pr(s=3|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=1)\times E(Y_3|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}}) \\
&\quad + \Pr(s=4|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=1)\times E(Y_4|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}}) \\
&\quad - \Pr(s=0|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=0)\times E(Y_0|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}}) \\
&\quad - \Pr(s=2|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=0)\times E(Y_2|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}}),
\end{aligned}
$$

where $\Pr(\cdot)$ is the probability that an individual has a given final educational level and the wage Y depends on the final schooling level. Of course, $\Pr(s=1|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=1)+\Pr(s=3|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=1)+\Pr(s=4|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=1)=1$, and $\Pr(s=0|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=0)+\Pr(s=2|\boldsymbol{X}=\boldsymbol{x},\boldsymbol{\theta}=\bar{\boldsymbol{\theta}},D_{0,1}=0)=1$.

Both outcomes and transition probabilities depend on the agent's observed and unobserved

Table 134: The Effects of Education on Log Wages, by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.10*	0.10*	0.11*	0.10**	0.10**
		(0.05)	(0.05)	(0.06)	(0.03)	(0.03)
Low Ability	0.31	0.10**	0.10**	0.10**	0.11**	
		(0.04)	(0.04)	(0.04)	(0.04)	
High Ability	0.31	0.11	0.11	0.11	0.07	
		(0.10)	(0.10)	(0.10)	(0.07)	
B. **Getting a GED** vs. **HS Dropout**						
All		0.11	0.04	0.06	0.03	0.04
		(0.08)	(0.05)	(0.05)	(0.05)	(0.05)
Low Ability	0.61	0.00	-0.00	0.00	-0.01	
		(0.06)	(0.06)	(0.06)	(0.06)	
High Ability	0.06	0.21	0.22*	0.22*	0.22*	
		(0.15)	(0.11)	(0.11)	(0.11)	
C. College Enrollment vs. **HS Graduate**						
All		0.12**	0.13**	0.14**	0.12**	0.11**
		(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
Low Ability	0.22	0.09*	0.09**	0.08*	0.10**	
		(0.05)	(0.04)	(0.04)	(0.05)	
High Ability	0.38	0.17**	0.17**	0.18**	0.15**	
		(0.03)	(0.03)	(0.04)	(0.03)	
D. **4-year college degree** vs. **Some College**						
All		0.05	0.11**	0.14**	0.08**	0.10**
		(0.04)	(0.04)	(0.04)	(0.03)	(0.04)
Low Ability	0.14	-0.07	-0.04	-0.04	-0.05	
		(0.07)	(0.05)	(0.05)	(0.05)	
High Ability	0.51	0.18**	0.19**	0.19**	0.18**	
		(0.04)	(0.05)	(0.06)	(0.04)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 135: The Effects of Education on Log PV of wages, by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.18**	0.18**	0.15**	0.30**	0.28**
		(0.06)	(0.06)	(0.07)	(0.04)	(0.04)
Low Ability	0.31	0.28**	0.28**	0.23**	0.35**	
		(0.04)	(0.04)	(0.06)	(0.04)	
High Ability	0.31	0.10	0.10	0.10	0.11	
		(0.12)	(0.12)	(0.12)	(0.08)	
B. **Getting a GED** vs. **HS Dropout**						
All		-0.21*	-0.11	-0.15*	-0.08	-0.12*
		(0.10)	(0.06)	(0.06)	(0.07)	(0.06)
Low Ability	0.61	-0.19*	-0.13	-0.18*	-0.10	
		(0.08)	(0.08)	(0.08)	(0.09)	
High Ability	0.06	-0.22	-0.04	-0.06	0.02	
		(0.19)	(0.15)	(0.16)	(0.17)	
C. College Enrollment vs. **HS Graduate**						
All		0.14**	0.14**	0.14**	0.14**	0.11**
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Low Ability	0.22	0.09*	0.06	0.00	0.08*	
		(0.06)	(0.05)	(0.05)	(0.05)	
High Ability	0.38	0.21**	0.21**	0.21**	0.20**	
		(0.04)	(0.04)	(0.04)	(0.04)	
D. **4-year college degree** vs. **Some College**						
All		0.06	0.17**	0.22**	0.11*	0.14**
		(0.06)	(0.04)	(0.05)	(0.05)	(0.04)
Low Ability	0.14	-0.11	-0.01	0.04	-0.03	
		(0.10)	(0.07)	(0.07)	(0.07)	
High Ability	0.51	0.23**	0.26**	0.28**	0.22**	
		(0.05)	(0.05)	(0.05)	(0.05)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 136: The Effects of Education on Physical Health (PCS-12), by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.27**	0.27**	0.29**	0.20**	0.18**
		(0.09)	(0.09)	(0.11)	(0.09)	(0.09)
Low Ability	0.31	0.20**	0.20**	0.19*	0.20*	
		(0.10)	(0.10)	(0.11)	(0.11)	
High Ability	0.31	0.36*	0.36*	0.36*	0.23	
		(0.18)	(0.18)	(0.18)	(0.15)	
B. **Getting a GED** vs. **HS Dropout**						
All		-0.19	-0.03	-0.07	0.00	-0.05
		(0.24)	(0.13)	(0.16)	(0.14)	(0.14)
Low Ability	0.61	-0.16	-0.06	-0.12	-0.02	
		(0.15)	(0.14)	(0.15)	(0.14)	
High Ability	0.06	-0.21	0.10	0.06	0.21	
		(0.43)	(0.35)	(0.35)	(0.35)	
C. College Enrollment vs. **HS Graduate**						
All		0.08	0.10*	0.12*	0.07	0.11*
		(0.06)	(0.05)	(0.06)	(0.07)	(0.05)
Low Ability	0.22	0.01	0.04	0.07	0.03	
		(0.12)	(0.10)	(0.09)	(0.10)	
High Ability	0.38	0.14*	0.14*	0.15*	0.13*	
		(0.08)	(0.08)	(0.08)	(0.07)	
D. **4-year college degree** vs. **Some College**						
All		0.22**	0.15**	0.13*	0.18**	0.17**
		(0.07)	(0.05)	(0.06)	(0.06)	(0.06)
Low Ability	0.14	0.26	0.18	0.15	0.19	
		(0.13)	(0.10)	(0.10)	(0.10)	
High Ability	0.51	0.17**	0.14*	0.12	0.17**	
		(0.07)	(0.08)	(0.09)	(0.07)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 137: The Effects of Education on Mental Health (MCS-12), by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.20*	0.20*	0.21*	0.15*	0.10
		(0.11)	(0.11)	(0.14)	(0.08)	(0.07)
Low Ability	0.31	0.17*	0.17*	0.16	0.20*	
		(0.09)	(0.09)	(0.10)	(0.09)	
High Ability	0.31	0.29	0.29	0.30	0.12	
		(0.22)	(0.22)	(0.22)	(0.17)	
B. **Getting a GED** vs. **HS Dropout**						
All		-0.48*	-0.03	-0.08	0.02	-0.07
		(0.23)	(0.12)	(0.14)	(0.14)	(0.12)
Low Ability	0.61	-0.12	0.08	0.02	0.12	
		(0.16)	(0.14)	(0.16)	(0.16)	
High Ability	0.06	-0.83*	-0.39	-0.41	-0.34	
		(0.38)	(0.29)	(0.32)	(0.31)	
C. College Enrollment vs. **HS Graduate**						
All		0.01	0.01	-0.01	0.04	0.03
		(0.06)	(0.05)	(0.06)	(0.05)	(0.05)
Low Ability	0.22	-0.01	-0.02	-0.04	-0.01	
		(0.10)	(0.08)	(0.08)	(0.09)	
High Ability	0.38	0.03	0.02	0.00	0.07	
		(0.06)	(0.06)	(0.07)	(0.06)	
D. **4-year college degree** vs. **Some College**						
All		0.02	-0.04	-0.07	-0.01	-0.01
		(0.10)	(0.07)	(0.08)	(0.08)	(0.07)
Low Ability	0.14	0.05	-0.05	-0.09	-0.03	
		(0.18)	(0.15)	(0.15)	(0.14)	
High Ability	0.51	-0.01	-0.04	-0.06	0.00	
		(0.07)	(0.07)	(0.08)	(0.09)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 138: The Effects of Education on Depression (CES-D), by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.16	0.16	0.13	0.23**	0.18**
		(0.10)	(0.10)	(0.11)	(0.08)	(0.08)
Low Ability	0.31	0.14*	0.14*	0.05	0.24*	
		(0.08)	(0.08)	(0.10)	(0.10)	
High Ability	0.31	0.20	0.20	0.20	0.26	
		(0.18)	(0.18)	(0.18)	(0.15)	
B. **Getting a GED** vs. **HS Dropout**						
All		-0.19	0.12	0.03	0.20	0.09
		(0.25)	(0.12)	(0.13)	(0.14)	(0.11)
Low Ability	0.61	0.08	0.20	0.13	0.25	
		(0.14)	(0.15)	(0.14)	(0.17)	
High Ability	0.06	-0.48	-0.18	-0.19	-0.14	
		(0.40)	(0.32)	(0.32)	(0.35)	
C. College Enrollment vs. **HS Graduate**						
All		0.11*	0.11**	0.10*	0.12**	0.12*
		(0.06)	(0.05)	(0.06)	(0.06)	(0.05)
Low Ability	0.22	0.10	0.11	0.11	0.11	
		(0.11)	(0.09)	(0.08)	(0.10)	
High Ability	0.38	0.11	0.11	0.10	0.13*	
		(0.07)	(0.08)	(0.08)	(0.07)	
D. **4-year college degree** vs. **Some College**						
All		0.19*	0.13**	0.10*	0.17*	0.12**
		(0.09)	(0.06)	(0.06)	(0.07)	(0.06)
Low Ability	0.14	0.27	0.24*	0.22*	0.25*	
		(0.15)	(0.12)	(0.12)	(0.12)	
High Ability	0.51	0.09	0.08	0.07	0.11	
		(0.07)	(0.07)	(0.07)	(0.08)	

Notes: The depression scale is normalized so that a higher score is associated with less depression. Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node. The CES-D index is scaled so larger numbers are beneficial outcomes (less depression).

Table 139: The Effects of Education on Pearlin, by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		-0.14	-0.14	-0.21	0.12*	0.14**
		(0.09)	(0.09)	(0.12)	(0.08)	(0.08)
Low Ability	0.31	0.02	0.02	-0.06	0.11	
		(0.08)	(0.08)	(0.08)	(0.08)	
High Ability	0.31	-0.37*	-0.37*	-0.39*	0.08	
		(0.18)	(0.18)	(0.19)	(0.15)	
B. **Getting a GED** vs. **HS Dropout**						
All		0.59**	0.21*	0.28*	0.14	0.21*
		(0.23)	(0.11)	(0.13)	(0.12)	(0.12)
Low Ability	0.61	0.28*	0.10	0.17	0.06	
		(0.13)	(0.12)	(0.12)	(0.13)	
High Ability	0.06	0.92**	0.59*	0.62*	0.52*	
		(0.40)	(0.28)	(0.30)	(0.27)	
C. College Enrollment vs. **HS Graduate**						
All		0.26**	0.23**	0.16**	0.29**	0.25**
		(0.06)	(0.06)	(0.07)	(0.06)	(0.06)
Low Ability	0.22	0.39**	0.37**	0.33**	0.39**	
		(0.13)	(0.10)	(0.09)	(0.11)	
High Ability	0.38	0.11	0.11	0.08	0.16*	
		(0.08)	(0.08)	(0.09)	(0.08)	
D. **4-year college degree** vs. **Some College**						
All		0.19*	0.13*	0.11	0.17*	0.14*
		(0.09)	(0.07)	(0.08)	(0.08)	(0.07)
Low Ability	0.14	0.24	0.19	0.18	0.20	
		(0.18)	(0.13)	(0.13)	(0.14)	
High Ability	0.51	0.13	0.11	0.09	0.14	
		(0.09)	(0.10)	(0.10)	(0.09)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 140: The Effects of Education on Self-Esteem (Rosenberg), by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.08	0.08	0.09	0.02	0.02
		(0.10)	(0.10)	(0.12)	(0.07)	(0.08)
Low Ability	0.31	0.05	0.05	0.08	0.01	
		(0.10)	(0.10)	(0.11)	(0.10)	
High Ability	0.31	0.08	0.08	0.08	0.03	
		(0.18)	(0.18)	(0.19)	(0.14)	
B. **Getting a GED** vs. **HS Dropout**						
All		-0.19	-0.07	-0.14	-0.01	-0.11
		(0.25)	(0.12)	(0.15)	(0.15)	(0.13)
Low Ability	0.61	-0.13	-0.07	-0.14	-0.02	
		(0.15)	(0.15)	(0.16)	(0.17)	
High Ability	0.06	-0.26	-0.08	-0.12	0.00	
		(0.40)	(0.28)	(0.28)	(0.29)	
C. College Enrollment vs. **HS Graduate**						
All		0.23**	0.20**	0.13**	0.28**	0.21**
		(0.07)	(0.07)	(0.07)	(0.07)	(0.06)
Low Ability	0.22	0.31*	0.28**	0.25*	0.29**	
		(0.14)	(0.12)	(0.10)	(0.13)	
High Ability	0.38	0.11*	0.10	0.06	0.19*	
		(0.07)	(0.07)	(0.08)	(0.08)	
D. **4-year college degree** vs. **Some College**						
All		0.21*	0.12	0.07	0.18*	0.15*
		(0.12)	(0.09)	(0.10)	(0.10)	(0.09)
Low Ability	0.14	0.40**	0.32**	0.26*	0.35**	
		(0.20)	(0.18)	(0.19)	(0.17)	
High Ability	0.51	0.03	0.01	-0.00	0.05	
		(0.11)	(0.11)	(0.12)	(0.11)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

characteristics. Final schooling levels do not create options for additional schooling.

Table 141: The Effects of Education on Participation, by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.06**	0.06**	0.05**	0.09**	0.09**
		(0.02)	(0.02)	(0.03)	(0.02)	(0.02)
Low Ability	0.31	0.07**	0.07**	0.05**	0.09**	
		(0.02)	(0.02)	(0.02)	(0.03)	
High Ability	0.31	0.04*	0.04*	0.04*	0.07**	
		(0.04)	(0.04)	(0.04)	(0.04)	
B. **Getting a GED** vs. **HS Dropout**						
All		-0.06	-0.06	-0.07*	-0.06	-0.07*
		(0.04)	(0.03)	(0.03)	(0.05)	(0.04)
Low Ability	0.61	-0.06*	-0.06	-0.07*	-0.06	
		(0.03)	(0.05)	(0.04)	(0.05)	
High Ability	0.06	-0.05	-0.06	-0.06	-0.05	
		(0.05)	(0.06)	(0.06)	(0.07)	
C. College Enrollment vs. **HS Graduate**						
All		-0.01	-0.01	-0.01	-0.01	-0.01
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Low Ability	0.22	-0.01	-0.02	-0.03	-0.02	
		(0.03)	(0.02)	(0.02)	(0.02)	
High Ability	0.38	-0.01	-0.01	-0.00	-0.01	
		(0.01)	(0.01)	(0.01)	(0.01)	
D. **4-year college degree** vs. **Some College**						
All		-0.01	0.00	0.01	-0.00	0.00
		(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Low Ability	0.14	-0.06	-0.05	-0.05	-0.05	
		(0.07)	(0.05)	(0.04)	(0.05)	
High Ability	0.51	0.03	0.02	0.02	0.03	
		(0.02)	(0.02)	(0.02)	(0.02)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 142: The Effects of Education on White Collar, by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.15**	0.15**	0.17**	0.05*	0.05
		(0.05)	(0.05)	(0.06)	(0.03)	(0.03)
Low Ability	0.31	0.06	0.06	0.08*	0.03	
		(0.04)	(0.04)	(0.05)	(0.04)	
High Ability	0.31	0.26**	0.26**	0.26**	0.16**	
		(0.09)	(0.09)	(0.09)	(0.06)	
B. **Getting a GED** vs. **HS Dropout**						
All		0.14	0.03	0.06	0.01	0.04
		(0.09)	(0.04)	(0.05)	(0.04)	(0.05)
Low Ability	0.61	0.08	0.03	0.05	0.01	
		(0.05)	(0.05)	(0.05)	(0.05)	
High Ability	0.06	0.20	0.05	0.06	0.03	
		(0.16)	(0.11)	(0.11)	(0.10)	
C. College Enrollment vs. **HS Graduate**						
All		0.22**	0.24**	0.28**	0.21**	0.23**
		(0.03)	(0.03)	(0.04)	(0.04)	(0.03)
Low Ability	0.22	0.13**	0.14**	0.15**	0.14**	
		(0.06)	(0.05)	(0.05)	(0.06)	
High Ability	0.38	0.33**	0.33**	0.34**	0.31**	
		(0.04)	(0.04)	(0.04)	(0.04)	
D. **4-year college degree** vs. **Some College**						
All		0.14**	0.25**	0.29**	0.20**	0.27**
		(0.06)	(0.04)	(0.05)	(0.05)	(0.04)
Low Ability	0.14	-0.02	0.12	0.19**	0.08	
		(0.12)	(0.10)	(0.09)	(0.11)	
High Ability	0.51	0.29**	0.31**	0.32**	0.29**	
		(0.05)	(0.05)	(0.06)	(0.05)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 143: The Effects of Education on Obesity, by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		0.01	0.01	-0.01	0.08*	0.10**
		(0.06)	(0.06)	(0.07)	(0.04)	(0.04)
Low Ability	0.31	0.11**	0.11**	0.11*	0.11**	
		(0.04)	(0.04)	(0.05)	(0.05)	
High Ability	0.31	-0.10	-0.10	-0.11	-0.02	
		(0.10)	(0.10)	(0.11)	(0.08)	
B. **Getting a GED** vs. **HS Dropout**						
All		0.12	0.02	0.05	-0.01	0.03
		(0.09)	(0.05)	(0.06)	(0.06)	(0.06)
Low Ability	0.61	0.07	0.01	0.05	-0.01	
		(0.06)	(0.06)	(0.06)	(0.06)	
High Ability	0.06	0.18	0.03	0.05	-0.00	
		(0.16)	(0.13)	(0.14)	(0.15)	
C. College Enrollment vs. **HS Graduate**						
All		-0.03	-0.06*	-0.09**	-0.03	-0.04
		(0.03)	(0.03)	(0.04)	(0.04)	(0.03)
Low Ability	0.22	0.04	0.01	-0.02	0.03	
		(0.06)	(0.05)	(0.05)	(0.05)	
High Ability	0.38	-0.09*	-0.10*	-0.11**	-0.07*	
		(0.04)	(0.04)	(0.04)	(0.04)	
D. **4-year college degree** vs. **Some College**						
All		-0.06	-0.08*	-0.08*	-0.07	-0.07
		(0.06)	(0.04)	(0.05)	(0.05)	(0.04)
Low Ability	0.14	-0.12	-0.17*	-0.19*	-0.17*	
		(0.10)	(0.07)	(0.07)	(0.08)	
High Ability	0.51	-0.01	-0.03	-0.05	-0.01	
		(0.05)	(0.05)	(0.06)	(0.05)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 144: The Effects of Education on Daily Smoking, by *Decision Node*

	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		-0.25**	-0.25**	-0.25**	-0.25**	-0.23**
		(0.05)	(0.05)	(0.07)	(0.03)	(0.03)
Low Ability	0.31	-0.28**	-0.28**	-0.28**	-0.28**	
		(0.04)	(0.04)	(0.05)	(0.04)	
High Ability	0.31	-0.23*	-0.23*	-0.24*	-0.14*	
		(0.11)	(0.11)	(0.11)	(0.07)	
B. **Getting a GED** vs. **HS Dropout**						
All		0.05	0.01	0.01	0.01	0.00
		(0.10)	(0.05)	(0.06)	(0.05)	(0.05)
Low Ability	0.61	-0.00	-0.01	-0.01	-0.01	
		(0.06)	(0.05)	(0.05)	(0.05)	
High Ability	0.06	0.10	0.06	0.06	0.06	
		(0.18)	(0.14)	(0.15)	(0.13)	
C. College Enrollment vs. **HS Graduate**						
All		-0.12**	-0.14**	-0.18**	-0.10**	-0.13**
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Low Ability	0.22	-0.07	-0.09*	-0.11**	-0.08	
		(0.06)	(0.05)	(0.04)	(0.05)	
High Ability	0.38	-0.18**	-0.19**	-0.21**	-0.14**	
		(0.04)	(0.04)	(0.04)	(0.03)	
D. **4-year college degree** vs. **Some College**						
All		-0.15**	-0.17**	-0.18**	-0.16**	-0.17**
		(0.05)	(0.04)	(0.05)	(0.04)	(0.04)
Low Ability	0.14	-0.10	-0.11*	-0.12	-0.10	
		(0.09)	(0.08)	(0.08)	(0.08)	
High Ability	0.51	-0.20**	-0.20**	-0.20**	-0.20**	
		(0.05)	(0.05)	(0.06)	(0.04)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

Table 145: The Effects of Education on Heavy Drinker, by *Decision Node*

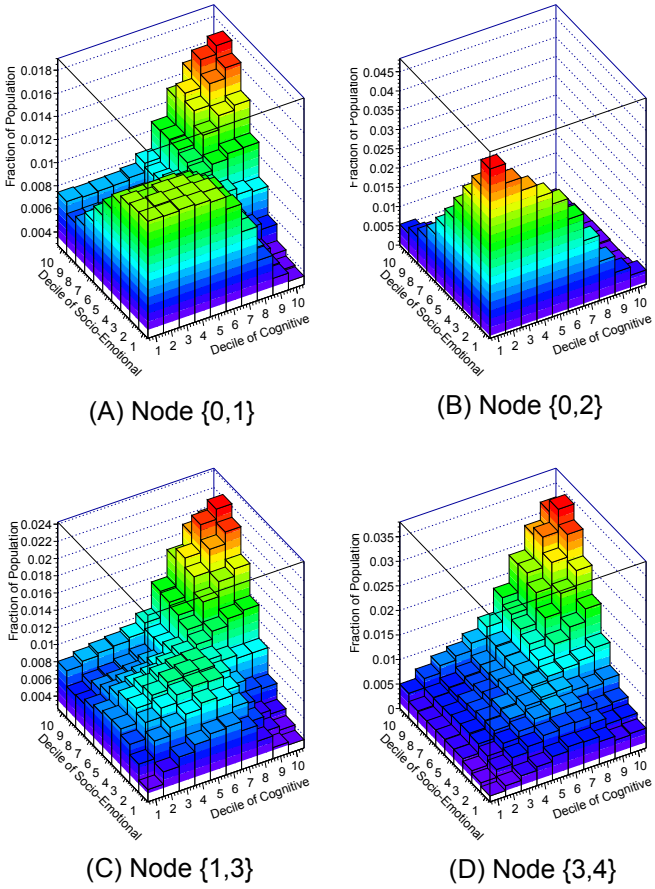
	$\%^{(a)}$	ATE*	ATE	TT	TUT	AMTE
A. Graduating from HS vs. Dropping from HS						
All		-0.10*	-0.10*	-0.13*	0.01	0.02
		(0.06)	(0.06)	(0.06)	(0.03)	(0.04)
Low Ability	0.31	0.03	0.03	0.02	0.05	
		(0.04)	(0.04)	(0.05)	(0.04)	
High Ability	0.31	-0.25**	-0.25**	-0.25**	-0.16*	
		(0.10)	(0.10)	(0.11)	(0.07)	
B. **Getting a GED** vs. **HS Dropout**						
All		-0.03	-0.07	-0.07	-0.08	-0.07
		(0.12)	(0.06)	(0.08)	(0.05)	(0.06)
Low Ability	0.61	-0.07	-0.08	-0.08	-0.09	
		(0.07)	(0.05)	(0.06)	(0.05)	
High Ability	0.06	0.02	-0.03	-0.02	-0.06	
		(0.21)	(0.16)	(0.17)	(0.15)	
C. College Enrollment vs. **HS Graduate**						
All		-0.02	-0.03	-0.06*	-0.01	-0.02
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Low Ability	0.22	0.04	0.04	0.03	0.04	
		(0.06)	(0.06)	(0.05)	(0.06)	
High Ability	0.38	-0.09**	-0.09**	-0.10**	-0.07*	
		(0.03)	(0.04)	(0.04)	(0.04)	
D. **4-year college degree** vs. **Some College**						
All		0.03	-0.01	-0.03	0.01	-0.01
		(0.06)	(0.04)	(0.04)	(0.05)	(0.04)
Low Ability	0.14	0.10	0.07	0.06	0.08	
		(0.13)	(0.09)	(0.08)	(0.09)	
High Ability	0.51	-0.03	-0.04	-0.04	-0.03	
		(0.03)	(0.04)	(0.04)	(0.04)	

Notes: Standard errors (in parentheses) and significance levels (* = $p < 0.05$, ** = $p < 0.01$) are calculated using 200 bootstrap samples. Each column presents the average effect of an educational decision. Each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. $\%^{(a)}$ represents the particular decision node by ability level. ATE* represents the average effect for the full population, while ATE presents the average effect for those who visit the decision node. The TT column presents the average effect for those who chose a higher level of schooling ($D_{j,j'} = 1$), and TUT presents the average effect for those who do not choose a higher level of schooling ($D_{j,j'} = 0$). Finally, AMTE presents the average effect for those who are indifferent between choosing a higher level of schooling or not. The table also presents the estimated treatment effects conditional upon endowment levels. The high (low) ability group is defined as those individuals with cognitive and socioemotional endowment above (below) the overall median. For each decision node we display the fraction of individuals with low and high ability levels visiting each node.

L The Effect of Cognitive and Socioemotional endowments

L.1 Sorting into Schooling

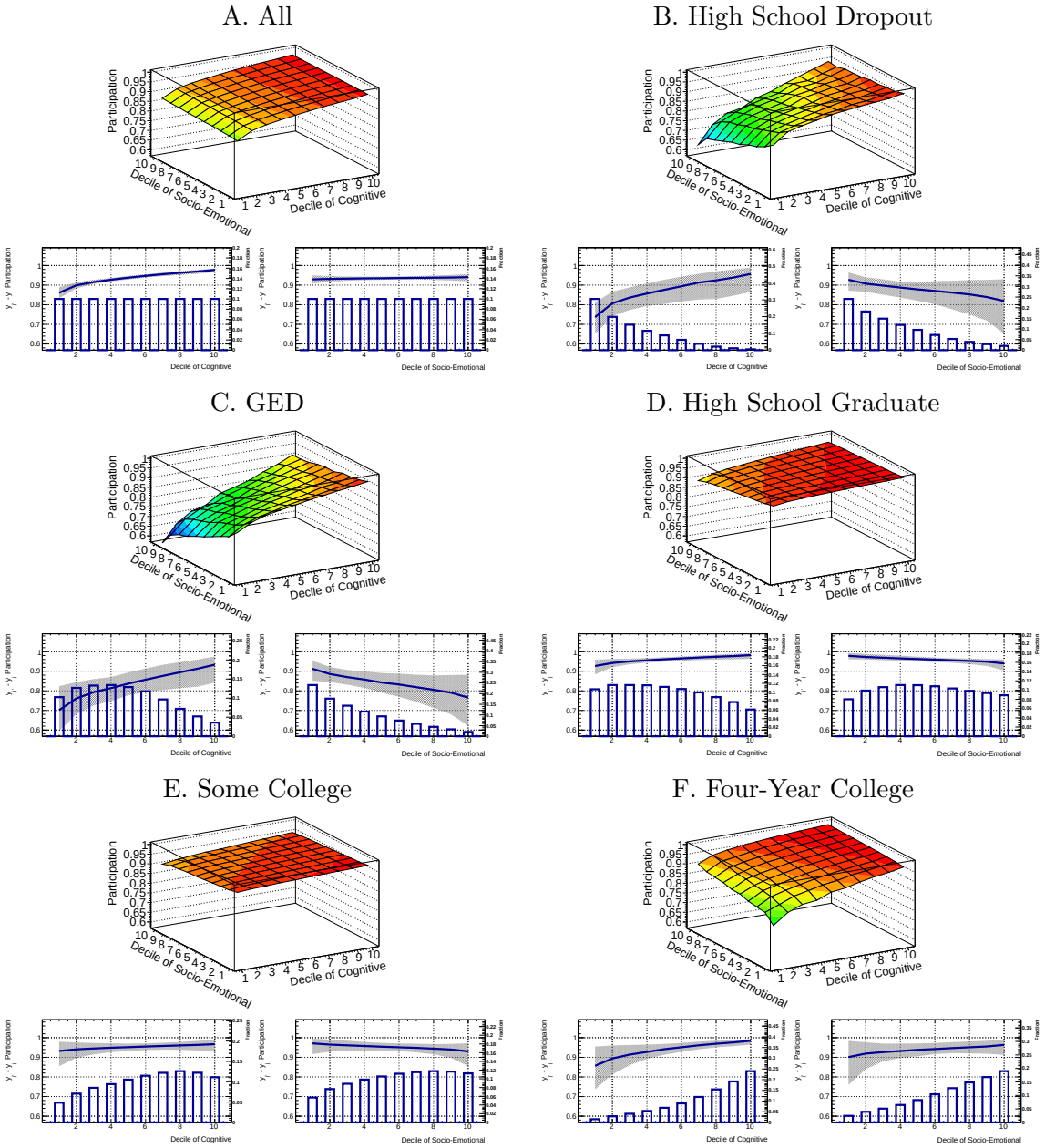
Figure 1: Distribution of Cognitive and Socioemotional Endowment by Decision Node



Note: Each panel presents the distribution of individuals by levels of endowments for individuals making a particular schooling choice decision node. We define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The deciles are computed using the overall marginal distributions of endowments (instead of the joint distribution). This explains why panel (A) for node {0,1} does not present bars of the same height. These are the distribution of abilities at each decision node. (A) Decision node $\{0, 1\}$ includes the full population, so this is what the base distribution looks like. The other figures show the selection on factors going into the other decision nodes. The correlation between the factors causes the main distribution to not be flat across deciles.

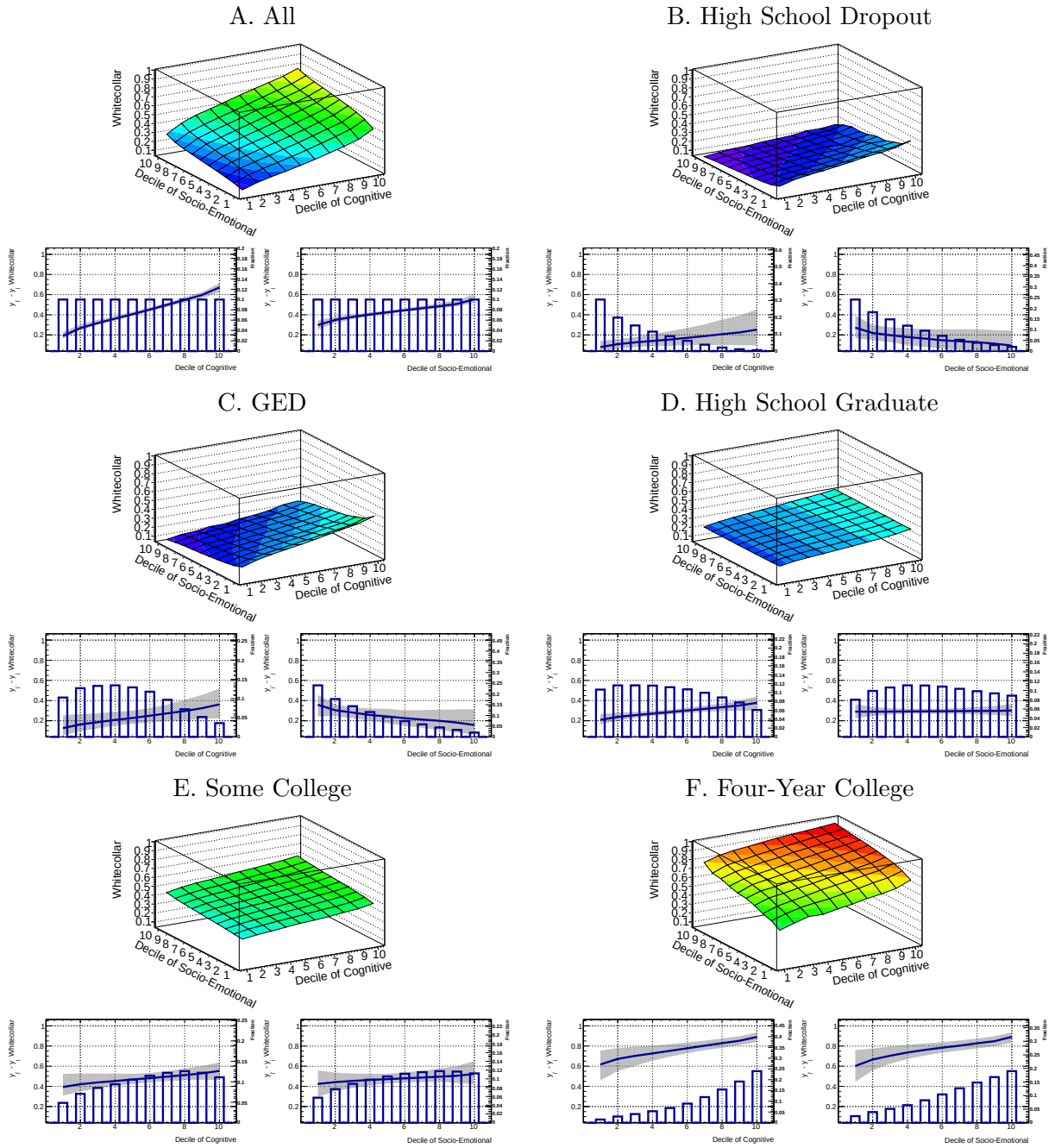
L.2 Labor Market Outcomes

Figure 2: The Effect of Cognitive and Socioemotional endowments on Labor Market Participation (age 30)



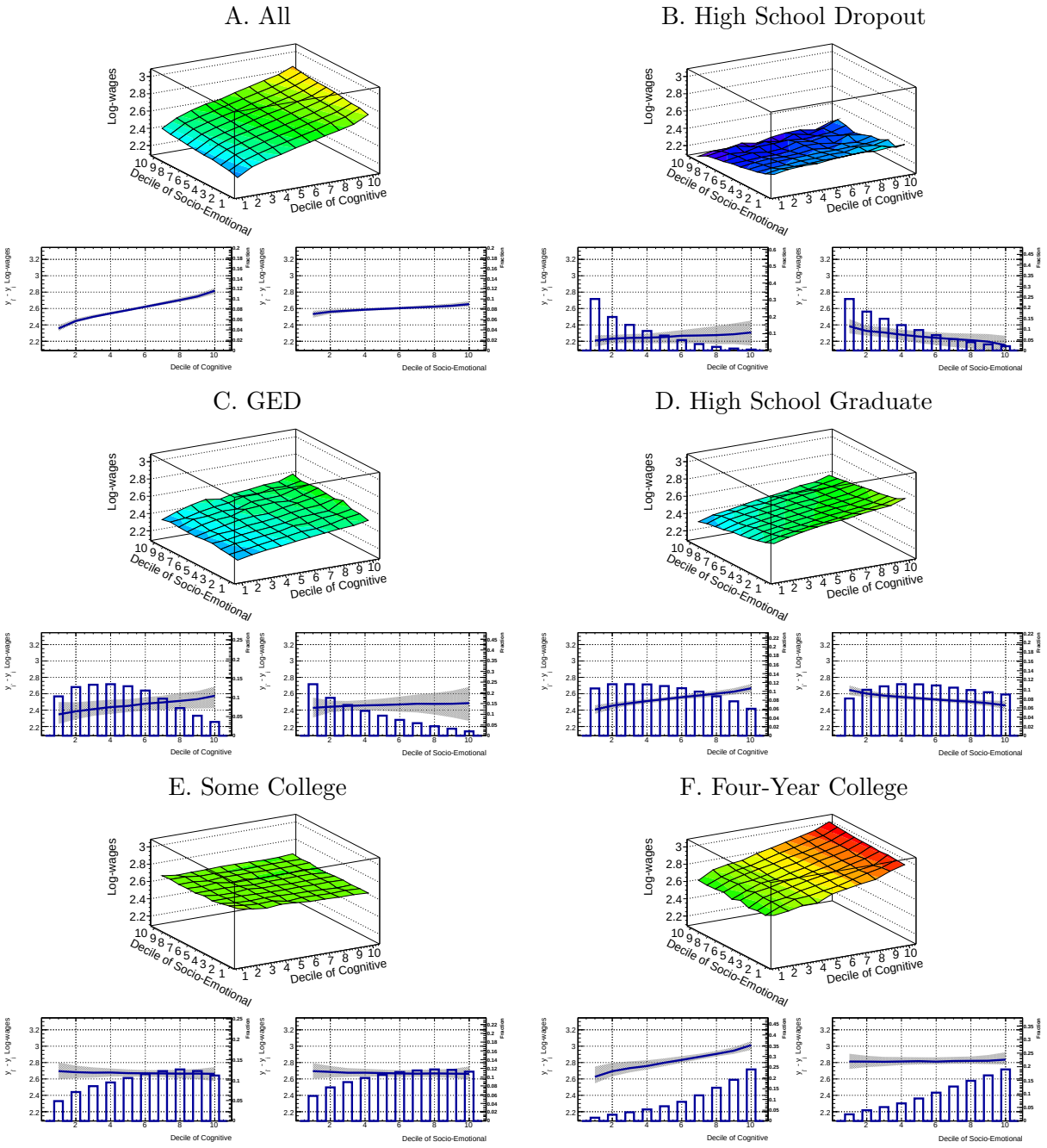
Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

Figure 3: The Effect of Cognitive and Socioemotional endowments on Probability of White-collar occupation (age 30)



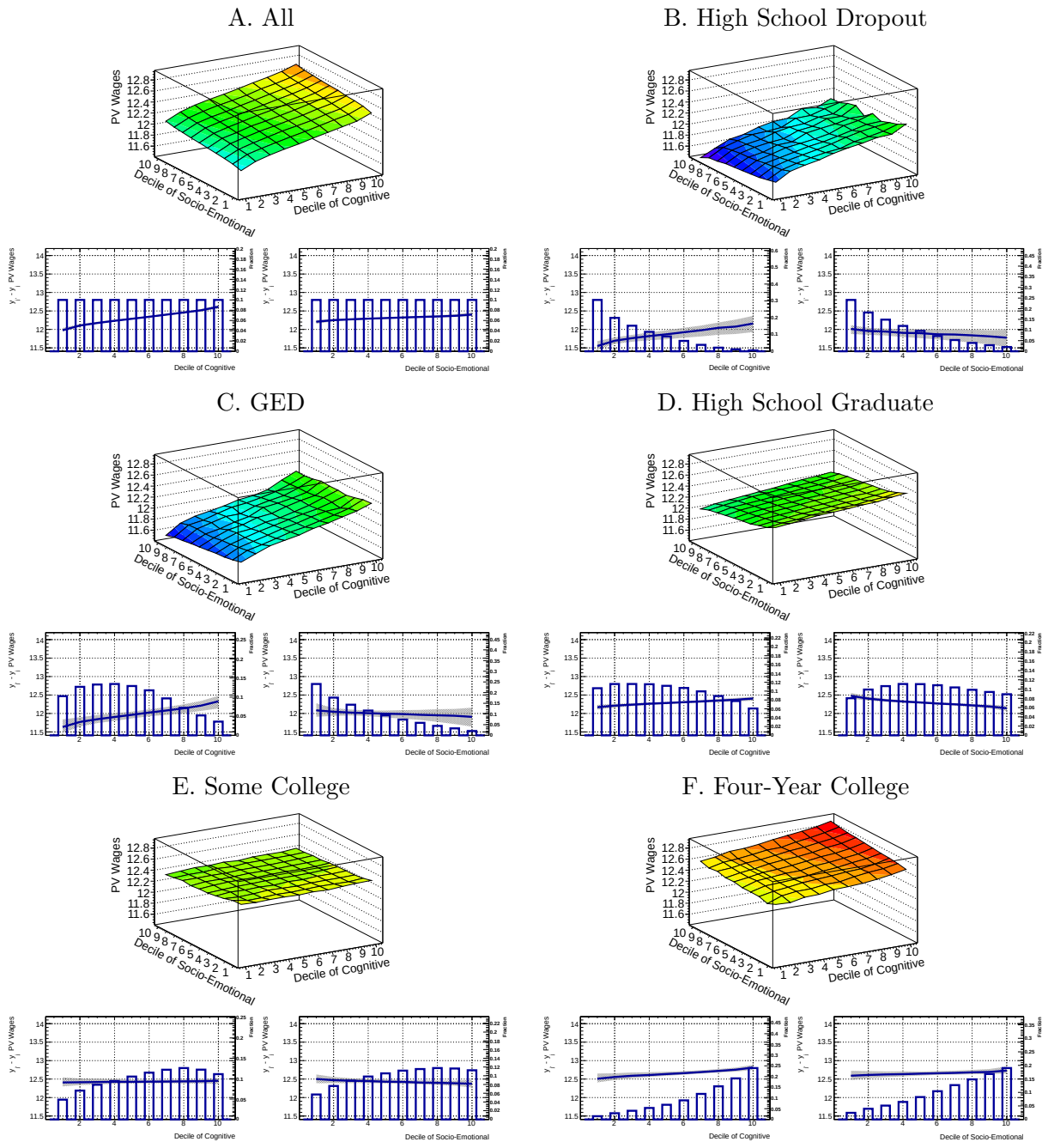
Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments defined over the whole population. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

Figure 4: The Effect of Cognitive and Socioemotional endowments on (log) Wages (age 30)



Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments defined over the whole population. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

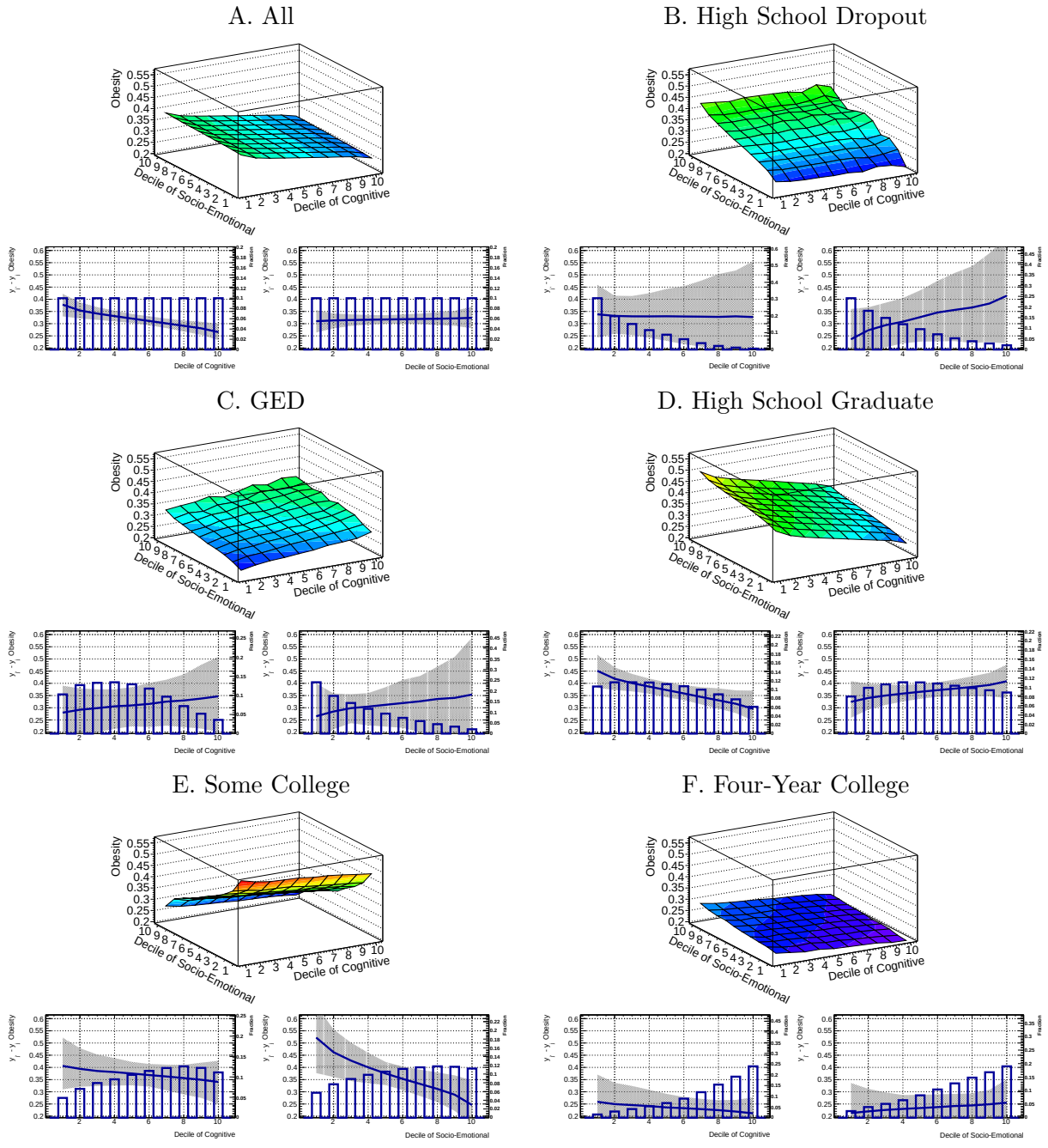
Figure 5: The Effect of Cognitive and Socioemotional endowments on the Present Value of Wages (age 20-40)



Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments defined over the whole population. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

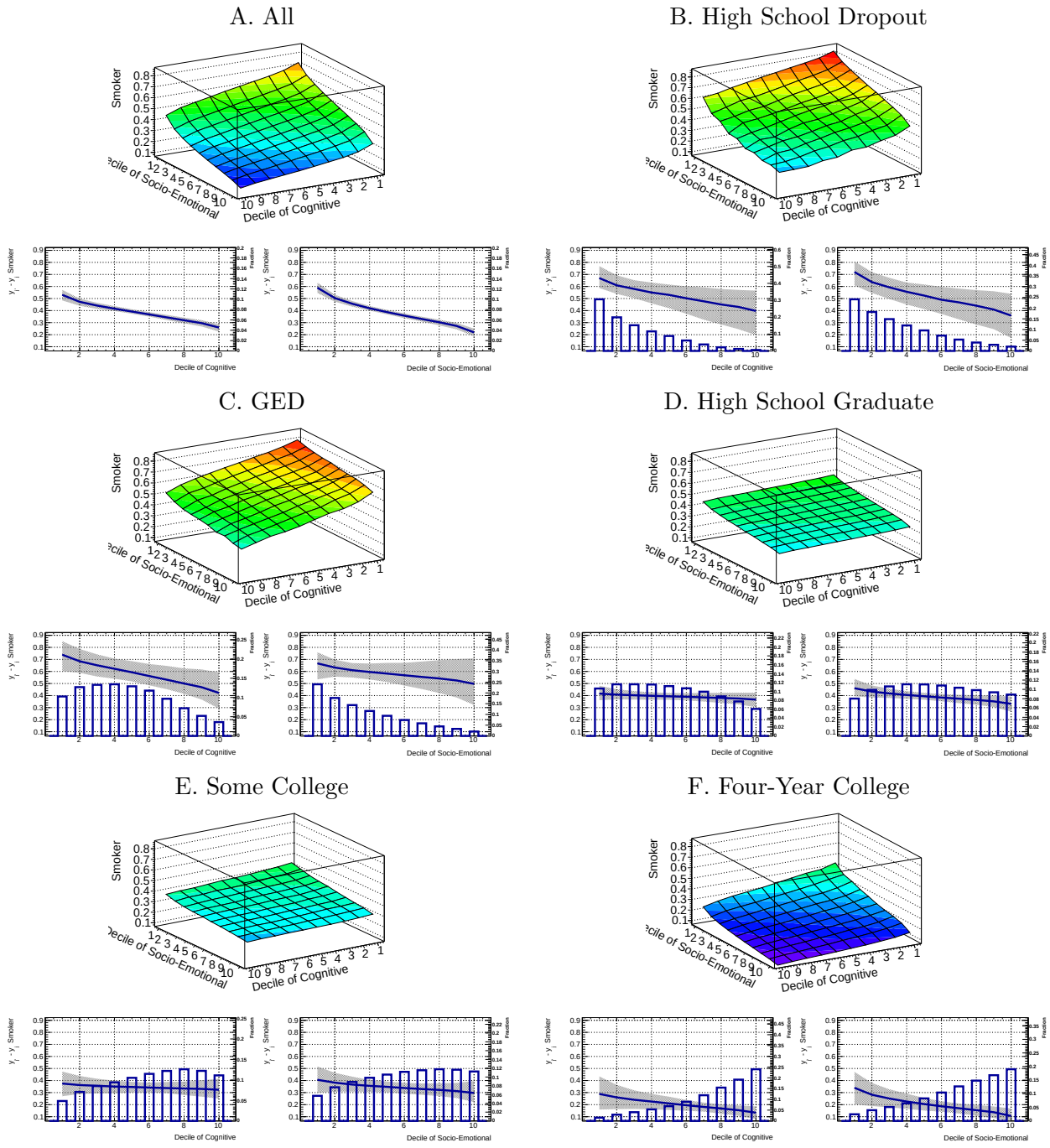
L.3 Physical Health Outcomes and Behaviors

Figure 6: The Effect of Cognitive and Socioemotional endowments on Obesity during Adulthood



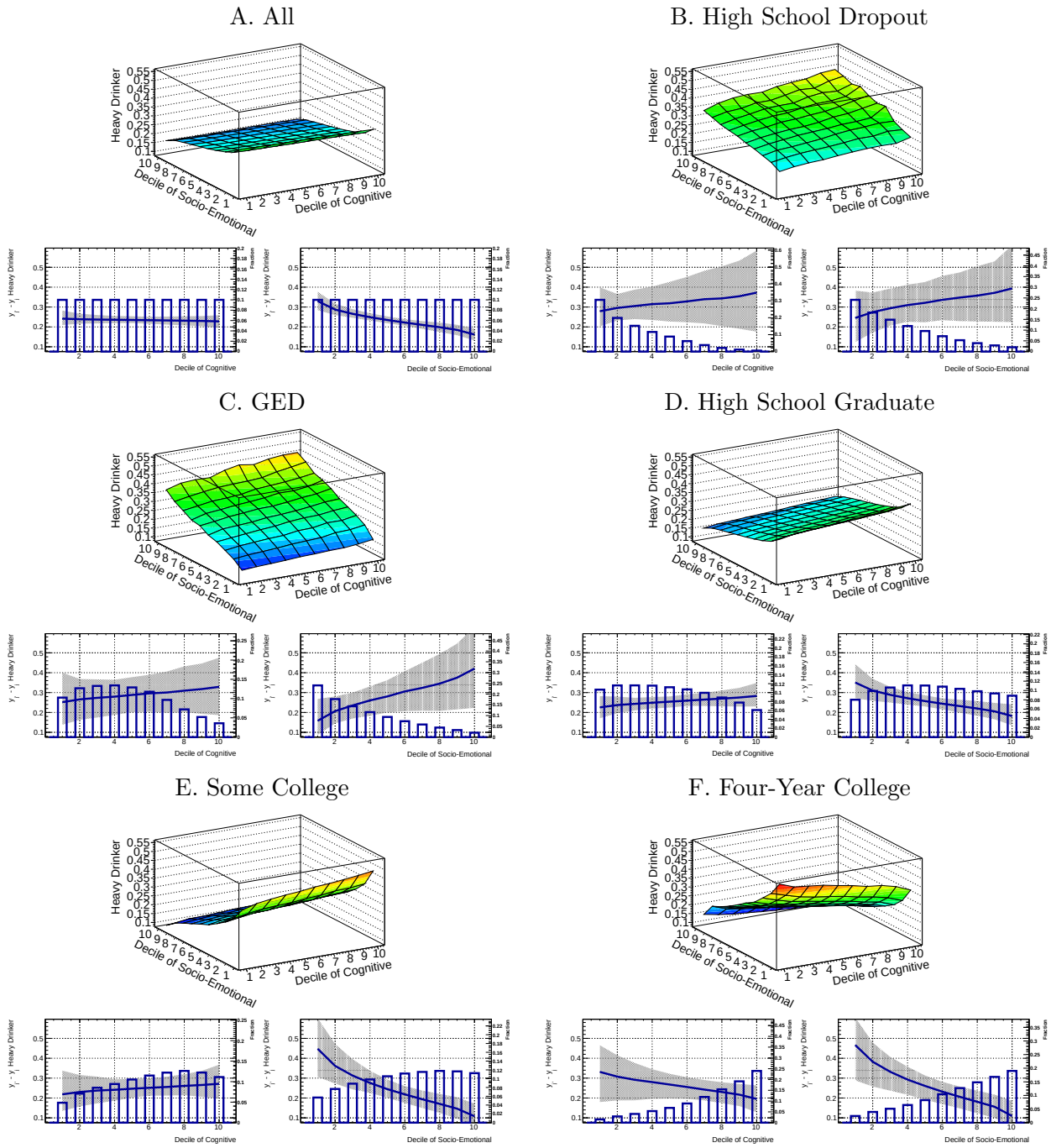
Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments defined over the whole population. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

Figure 7: The Effect of Cognitive and Socioemotional endowments on Smoking during Adulthood



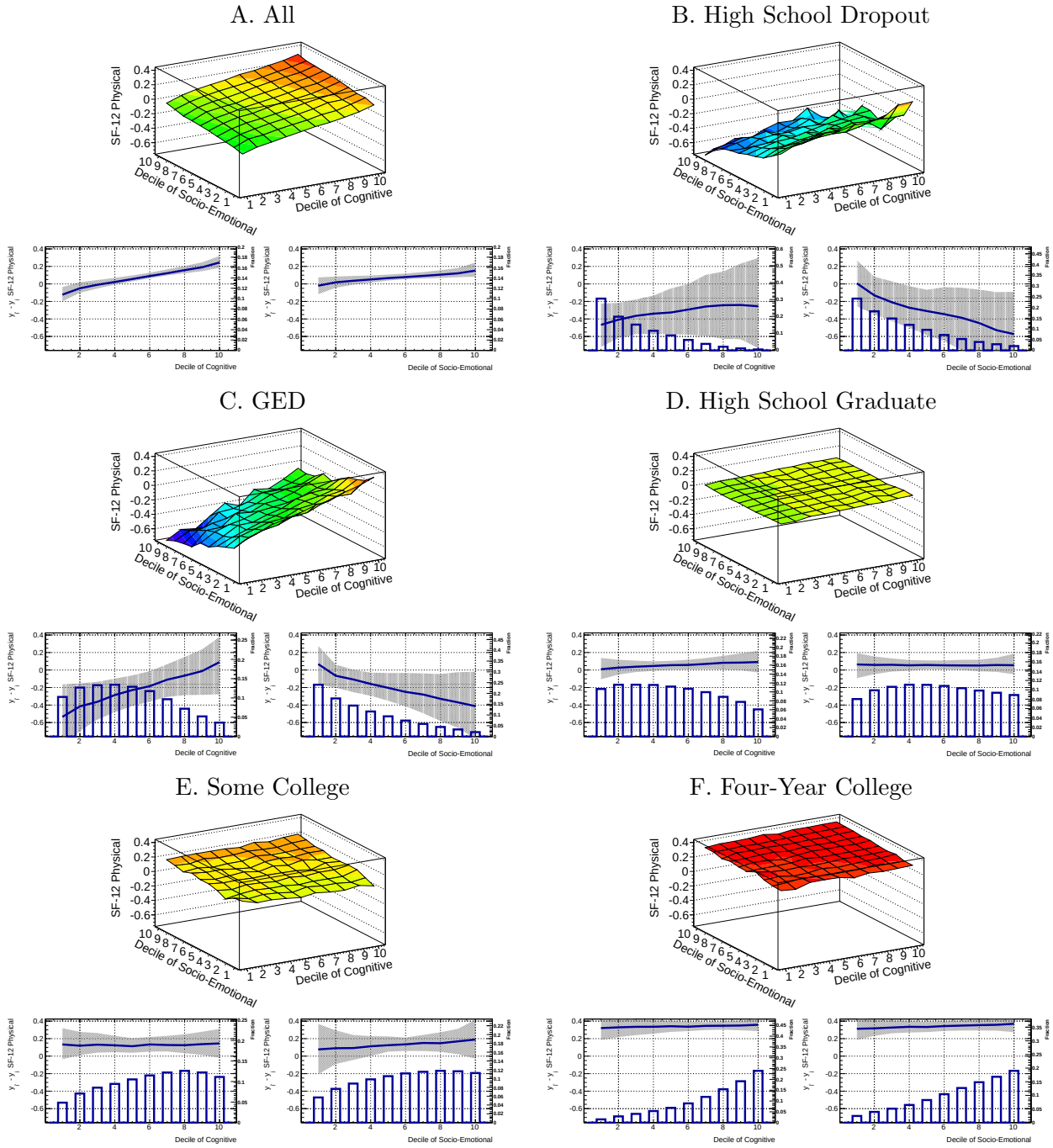
Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments defined over the whole population. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

Figure 8: The Effect of Cognitive and Socioemotional endowments on Heavy Drinking during Adulthood



Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments defined over the whole population. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

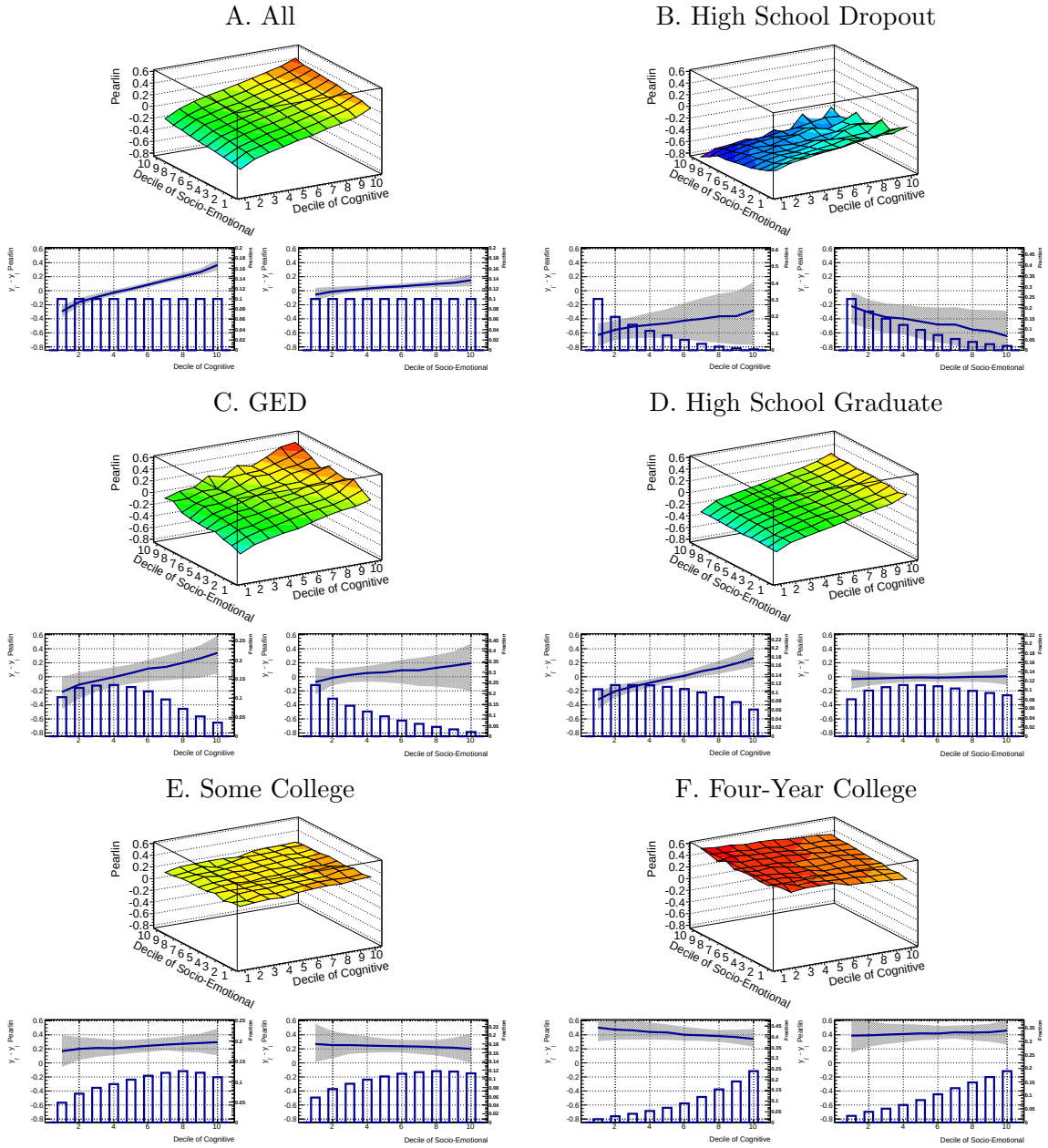
Figure 9: The Effect of Cognitive and Socioemotional endowments on Physical Health at age 40 (PCS-12)



Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments defined over the whole population. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

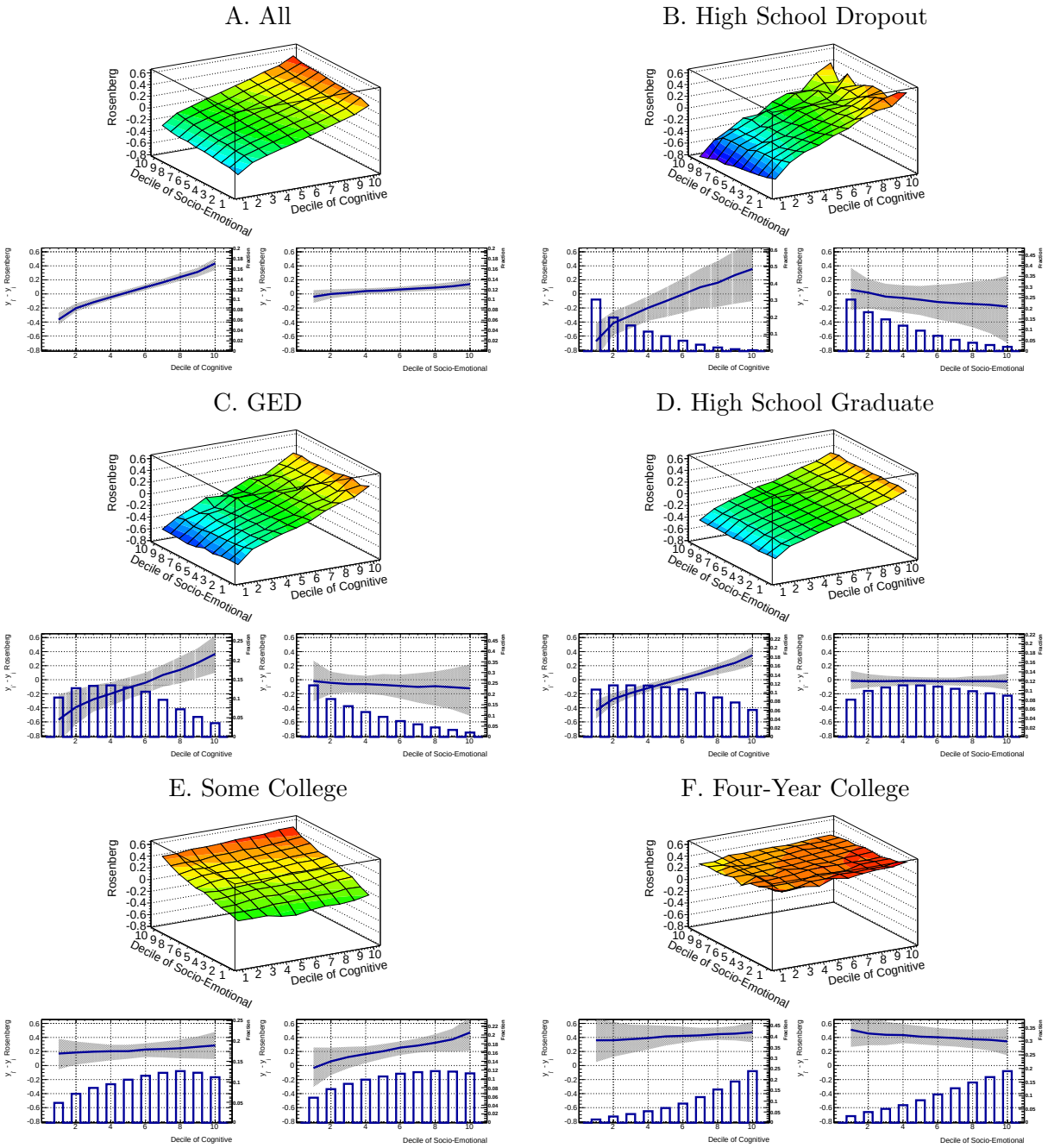
L.4 Mental Health Outcomes

Figure 10: The Effect of Cognitive and Socioemotional endowments on Pearlin's "Personal Mastery Scale"



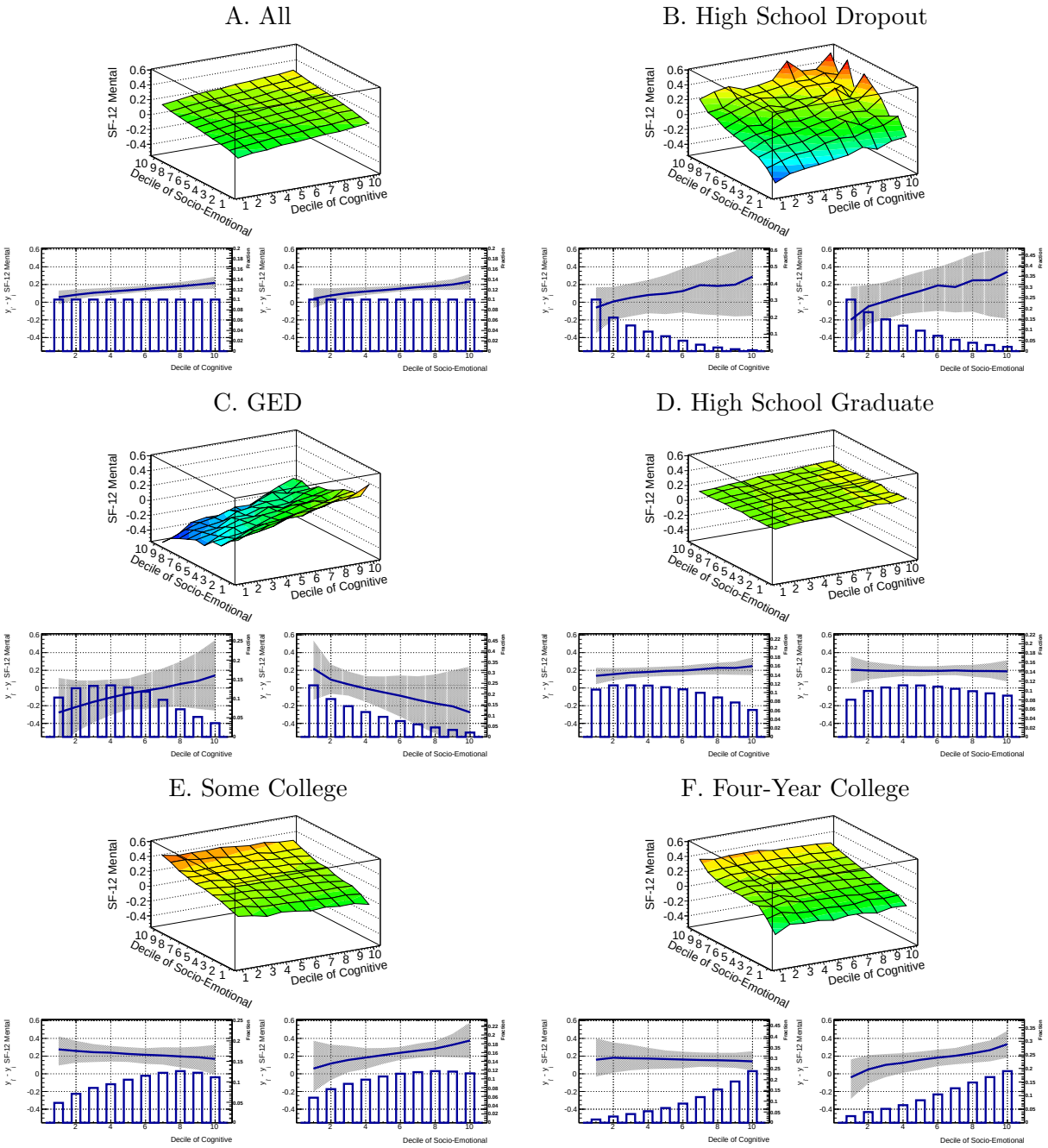
Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments defined over the whole population. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

Figure 11: The Effect of Cognitive and Socioemotional endowments on Self-Esteem during Adulthood (Rosenberg Measure)



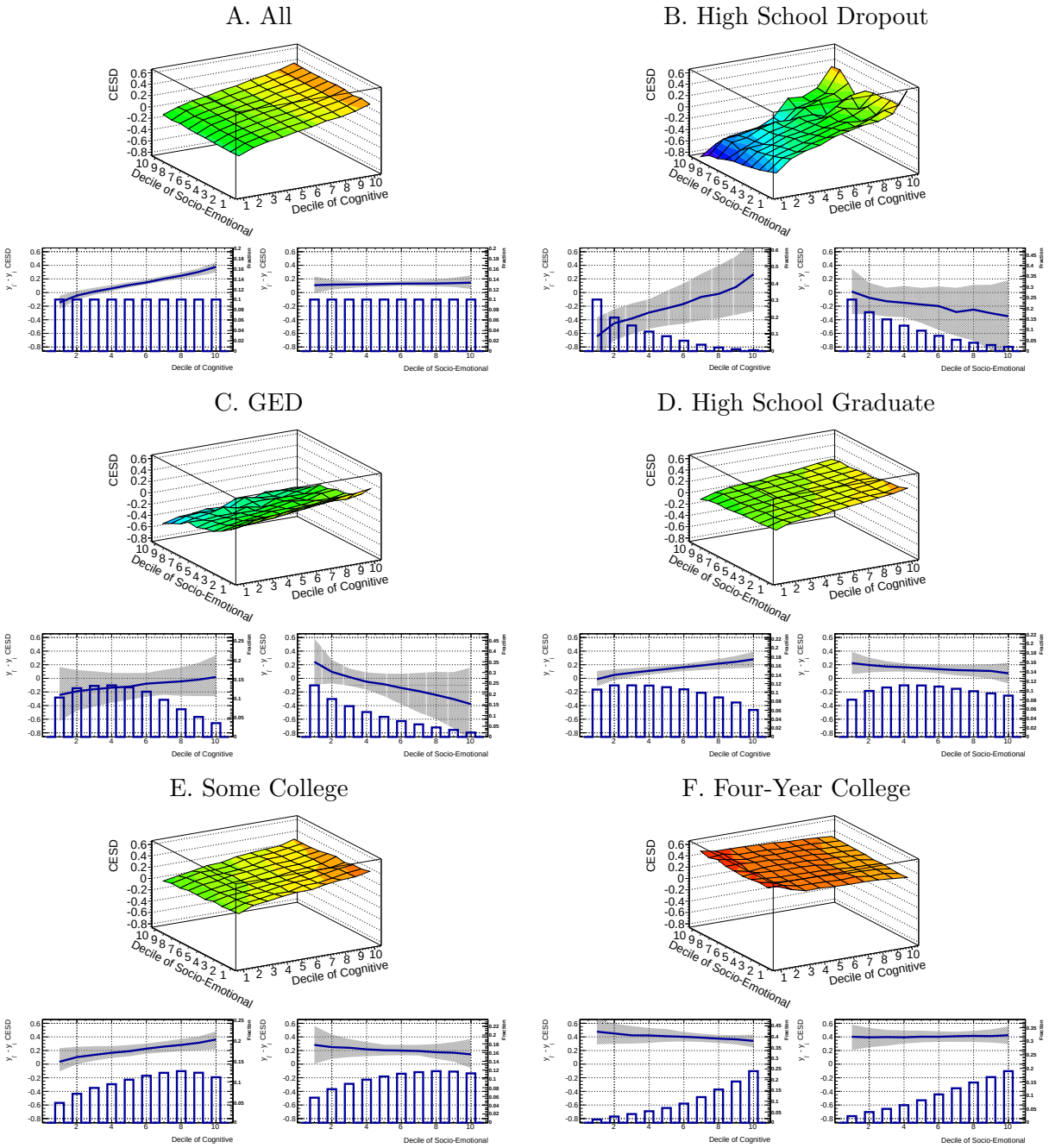
Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments defined over the whole population. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

Figure 12: The Effect of Cognitive and Socioemotional endowments on Mental Health at age 40 (MCS-12)



Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments defined over the whole population. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment.

Figure 13: The Effect of Cognitive and Socioemotional endowments on Depression at age 40 (CES-D - Scale Normalized So Higher Values Correspond to More Beneficial Outcomes)



Note: For each schooling level we present three figures. The first figure (top) displays the levels of the outcome as a function of cognitive and socioemotional endowments. In particular, we present the average level of outcomes for different deciles of cognitive and socioemotional endowments. Notice that we define as "decile 1" the decile with the lowest values of endowments and "decile 10" as the decile with the highest levels of endowments. The second figure (bottom left) displays the average levels of endowment across deciles of cognitive endowments. The bars in this figure indicates the fraction of individuals reporting the respective schooling level for each decile of cognitive endowment defined over the whole population. The last figure (bottom right) mimics the structure of the second one but now for the socioemotional endowment. The CES-D index is scaled so larger numbers are beneficial outcomes (less depression).

M The Effect of Endowments on Treatment Effects

These figures complement the results from the treatment effect tables 134 through 145.

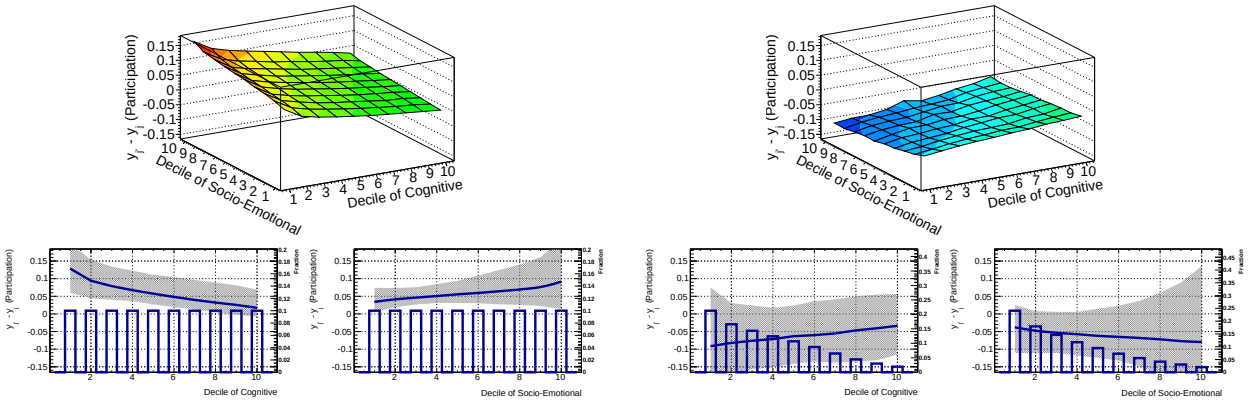
Each figure analyzes the node-specific average treatment effects of educational decisions on the outcome of interest defined in Section 3.3 of the paper. For a particular outcome, the effect is defined as the difference in the outcomes associated with two schooling levels (not necessarily final or terminal schooling levels). For each pairwise comparison of outcomes, let Y_i and Y_j denotes the outcomes associated with schooling levels i and j, respectively. Importantly, each schooling level might provide the option to pursuing higher schooling levels. Final schooling levels do not allow for further options. Notice that in the figures final schooling levels are highlighted using bold letters. For each pair of schooling levels i and j, the first figure (top) presents $E(Y_i - Y_j|d^C, d^{SE})$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments. $E(Y_i - Y_j|d^C, d^{SE})$ is computed for those who reach the decision node involving a decision between levels i and j. The second figure (bottom left) presents $E(Y_i - Y_j|d^C)$ so that the socioemotional factor is integrated out. The bars in this figure displays, for a given decile of cognitive endowment, the fraction of individuals visiting the node leading to the educational decision involving levels i and j. The last figure (bottom right) presents $E(Y_i - Y_j|d^{SE})$ as well as, for a given decile of socioemotional endowment, the fraction of individuals visiting the node leading to the educational decision involving levels i and j. Despite the apparent slope of the socioemotional measurements in many outcomes, for most, the factor is not statistically significant within each schooling level.

M.1 Labor Market Outcomes

Figure 14: Average Treatment Effect of Education on Labor Market Participation, by *Decision Node* and Endowment Levels

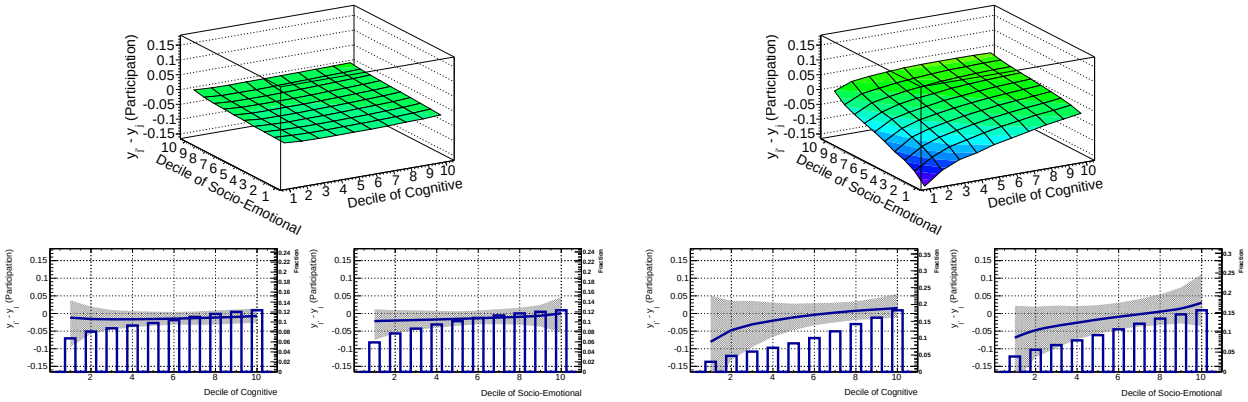
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

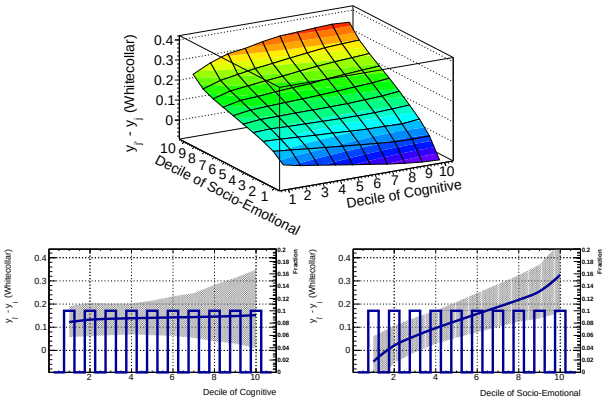
D. **Some College** vs. **4-year college degree**



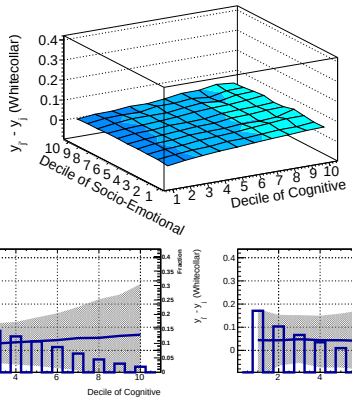
Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 15: Average Treatment Effect of Probability of White-collar Employment at Age 30, by *Decision Node* and Endowment Levels

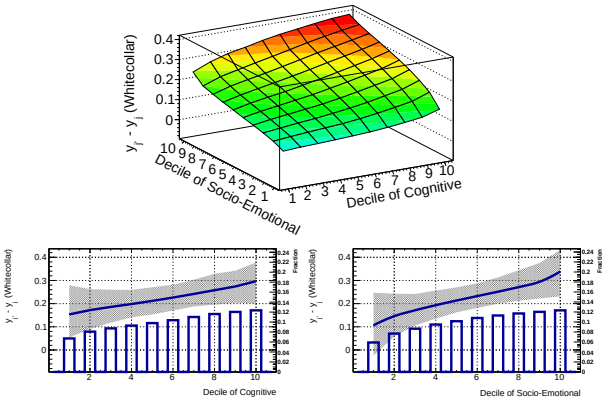
A. Dropping from HS vs. Graduating from HS



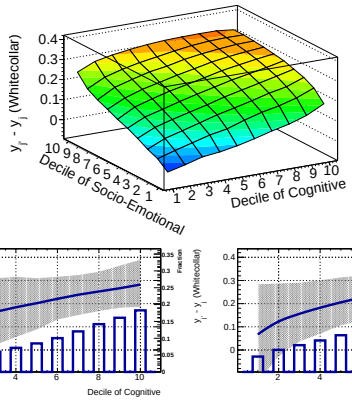
B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment



D. **Some College** vs. **4-year college degree**

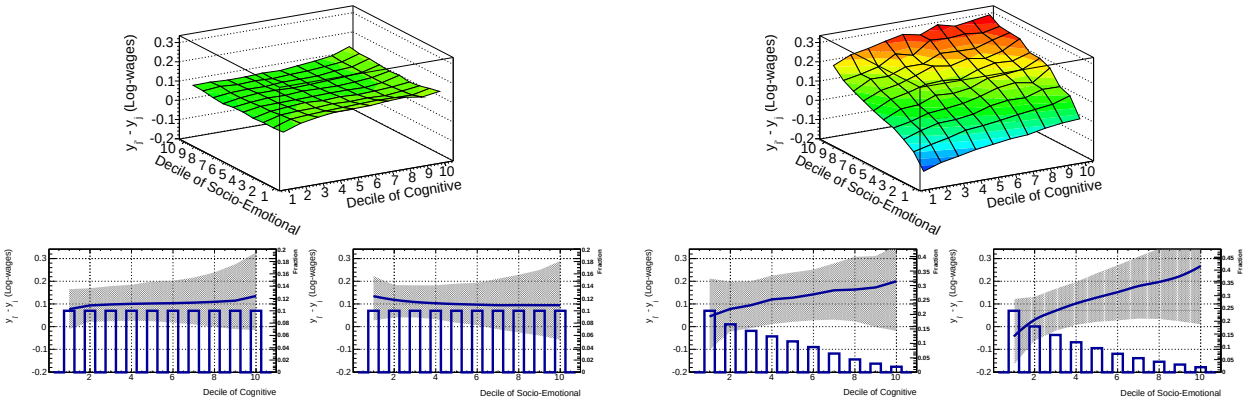


Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 16: Average Treatment Effect of Education on (Log) Wages at Age 30, by *Decision Node* and Endowment Levels

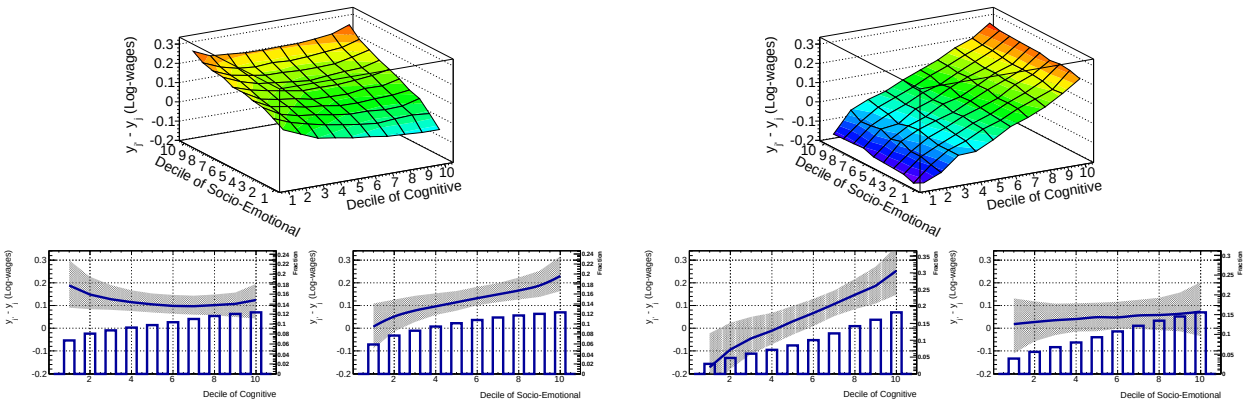
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

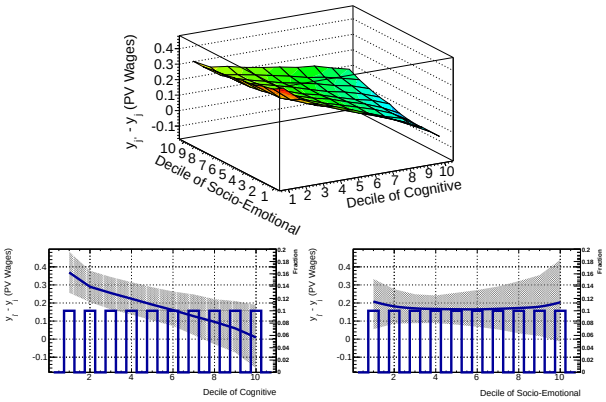
D. **Some College** vs. **4-year college degree**



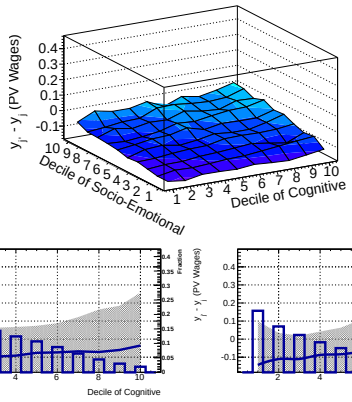
Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 17: Average Treatment Effect of Education on Present Value of Wages, by *Decision Node* and Endowment Levels

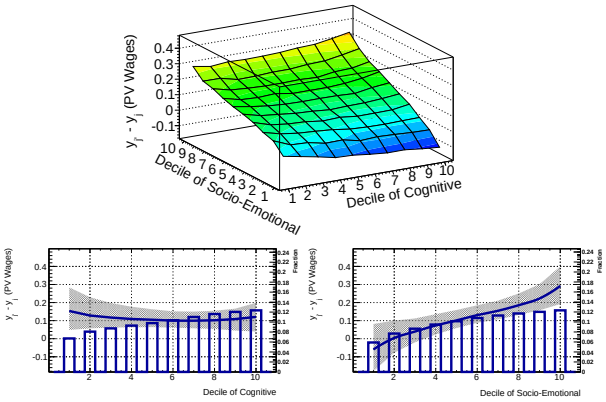
A. Dropping from HS vs. Graduating from HS



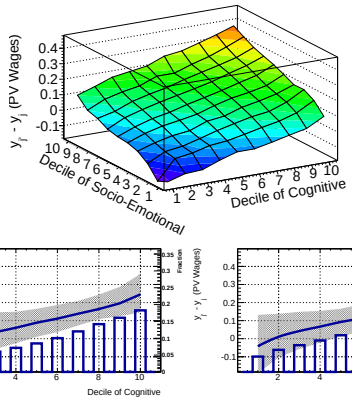
B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment



D. **Some College** vs. **4-year college degree**

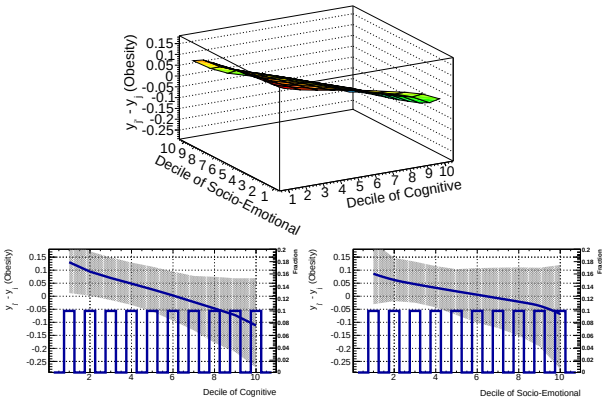


Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

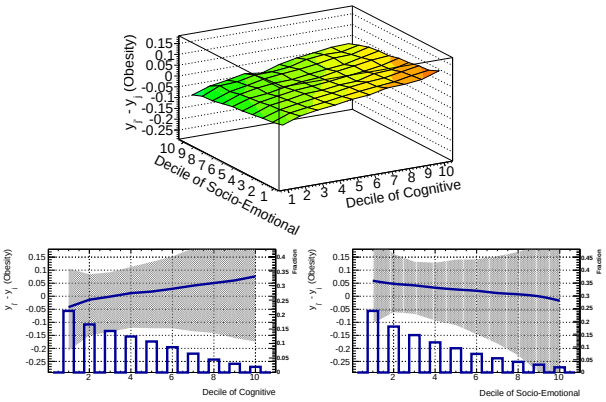
M.2 Physical Health Outcomes and Behaviors

Figure 18: Average Treatment Effect of Education on Probability of Being Obese (2006), by *Decision Node* and Endowment Levels

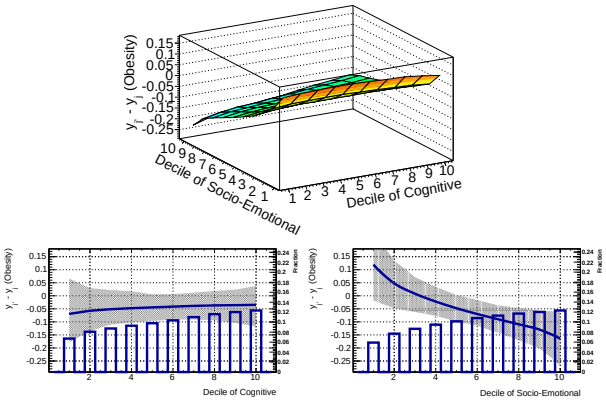
A. Dropping from HS vs. Graduating from HS



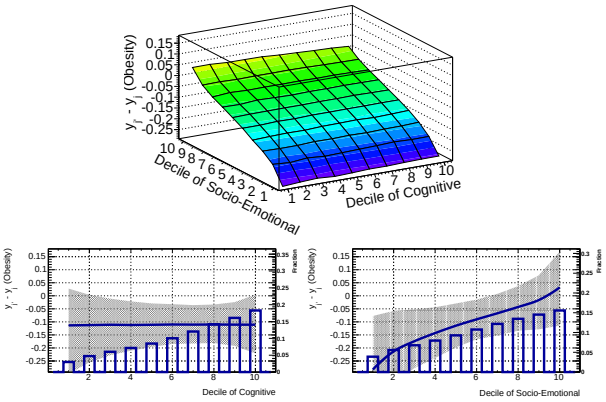
B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment



D. **Some College** vs. **4-year college degree**

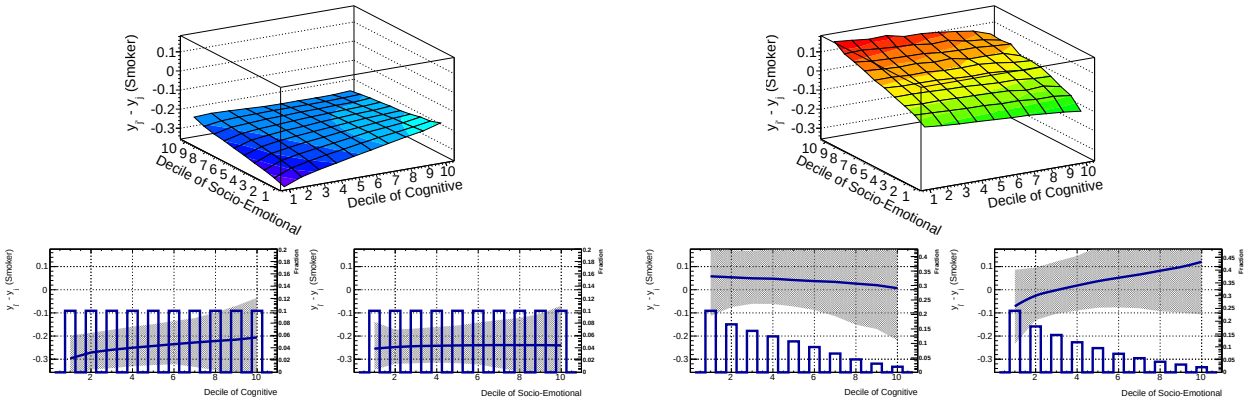


Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 19: Average Treatment Effect of Education on Probability of Being a Smoker, by *Decision Node* and Endowment Levels

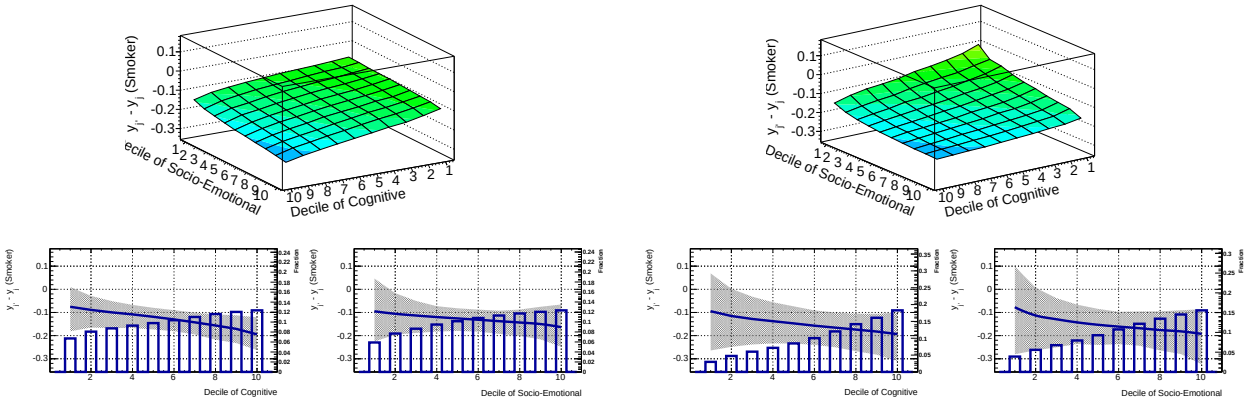
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

D. **Some College** vs. **4-year college degree**

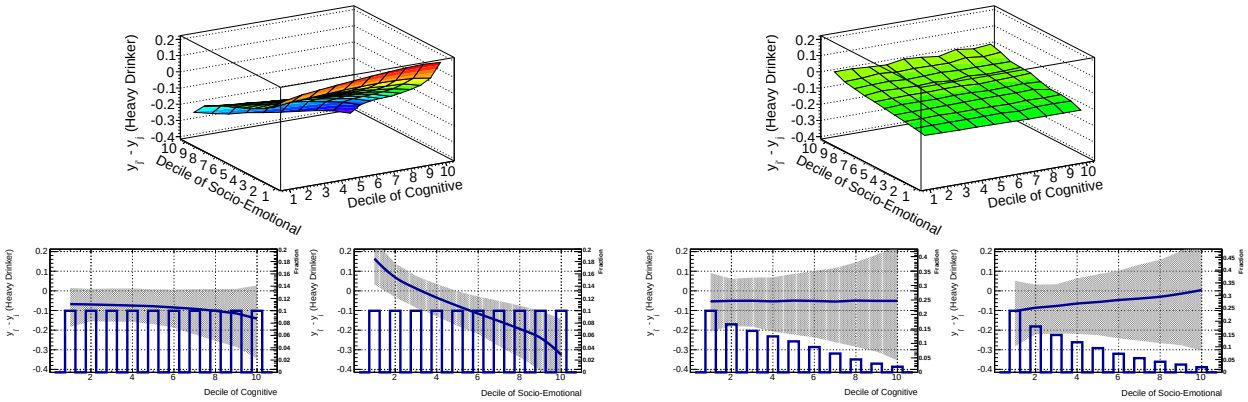


Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 20: Average Treatment Effect of Education on Probability of Being a Heavy Drinker, by *Decision Node* and Endowment Levels

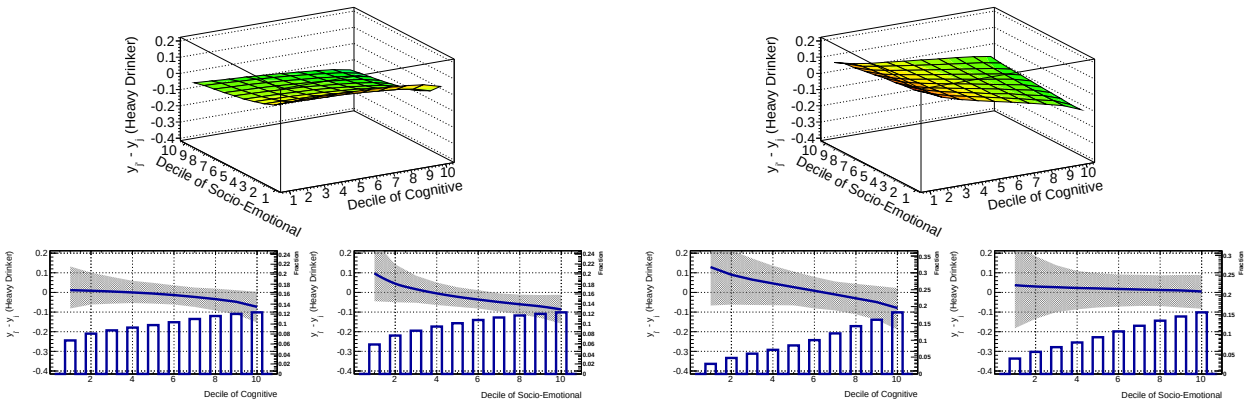
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

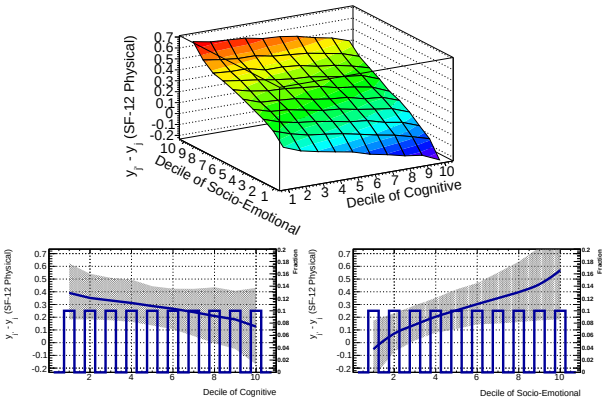
D. **Some College** vs. **4-year college degree**



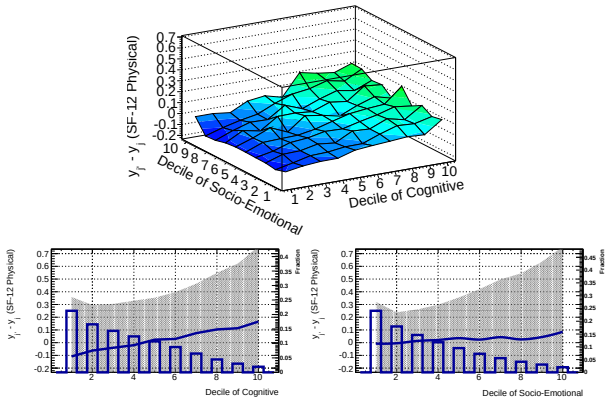
Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 21: Average Treatment Effect of Education on Physical Health (PCS-12) at Age 40, by *Decision Node* and Endowment Levels

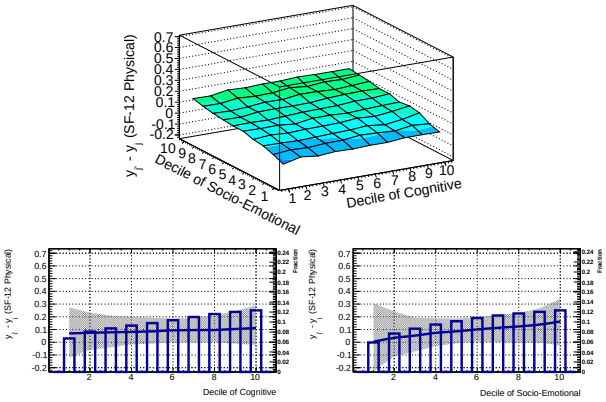
A. Dropping from HS vs. Graduating from HS



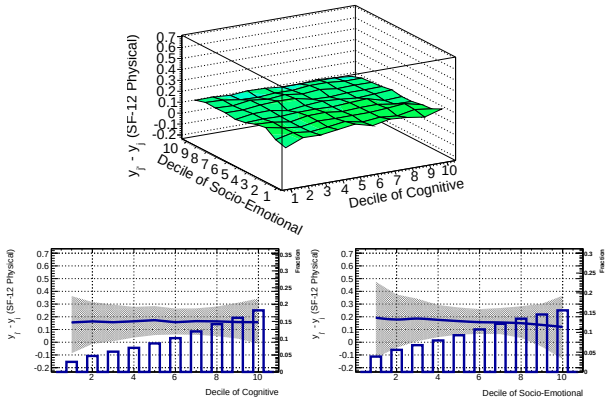
B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment



D. **Some College** vs. **4-year college degree**



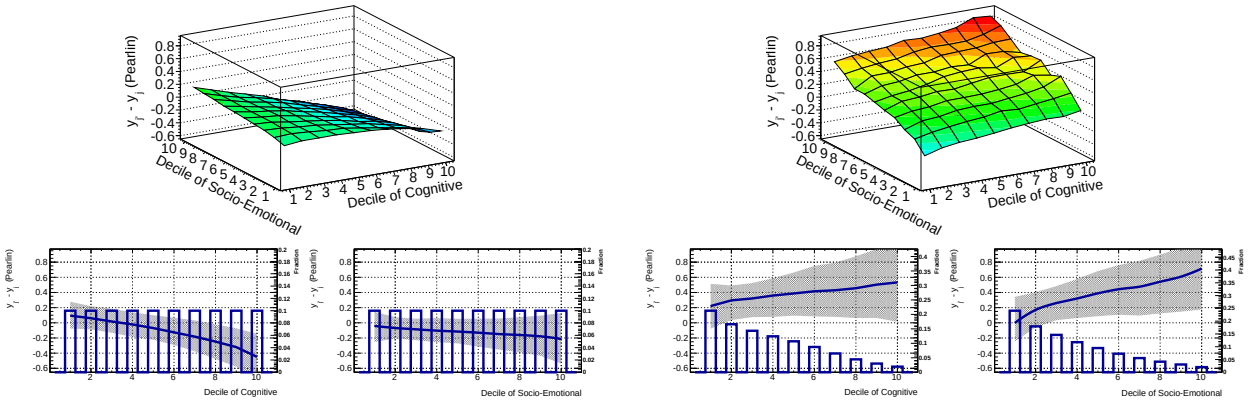
Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

M.3 Mental Health Outcomes

Figure 22: Average Treatment Effect of Education on Pearlin's "Personal Mastery Scale" (1992), by *Decision Node* and Endowment Levels

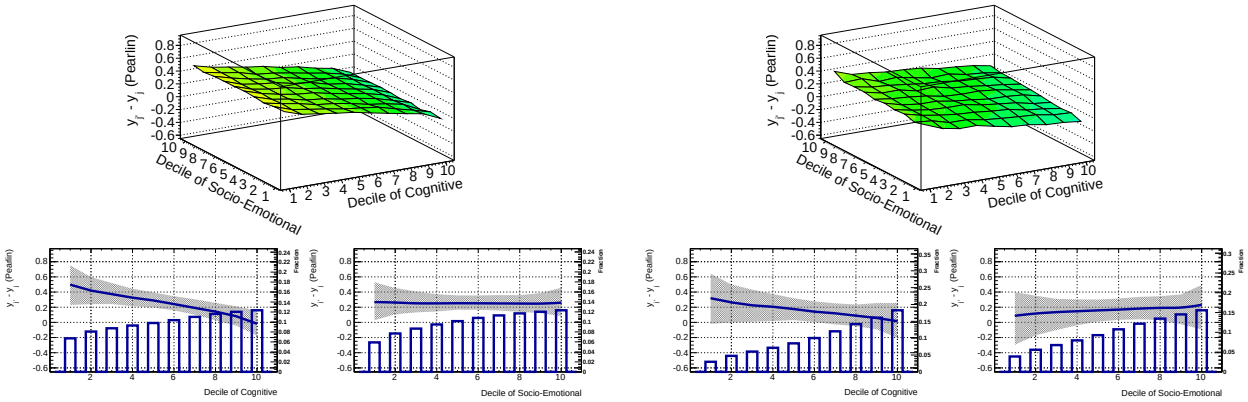
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

D. **Some College** vs. **4-year college degree**

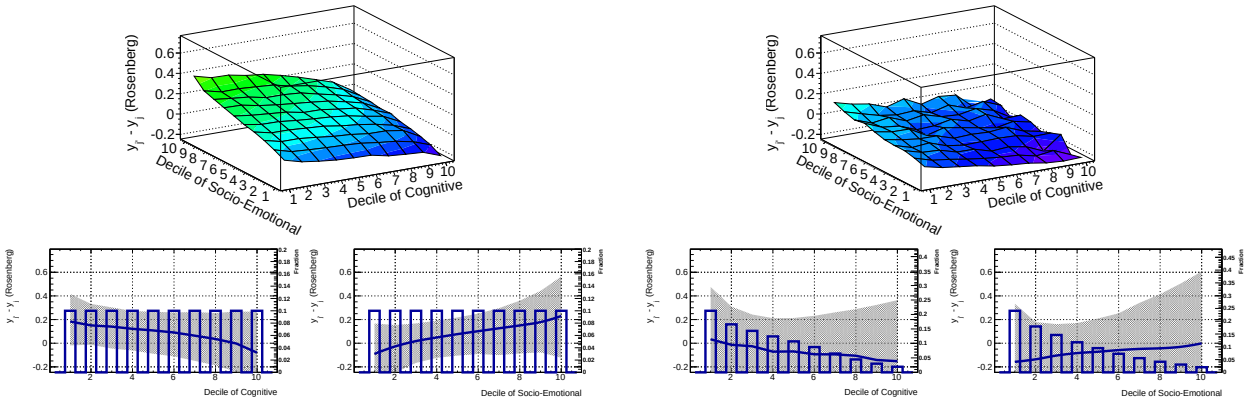


Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 23: Average Treatment Effect of Education on Self-Esteem (2006), by *Decision Node* and Endowment Levels

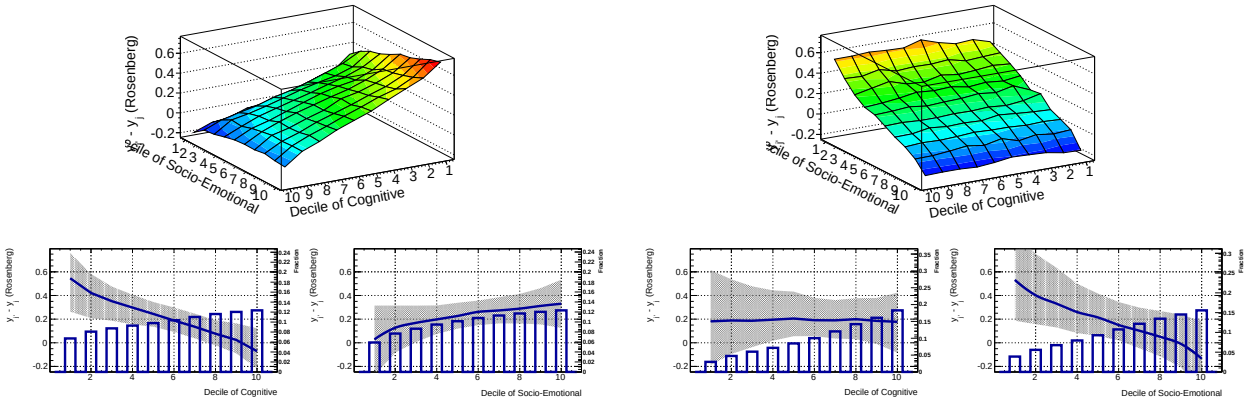
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

D. **Some College** vs. **4-year college degree**

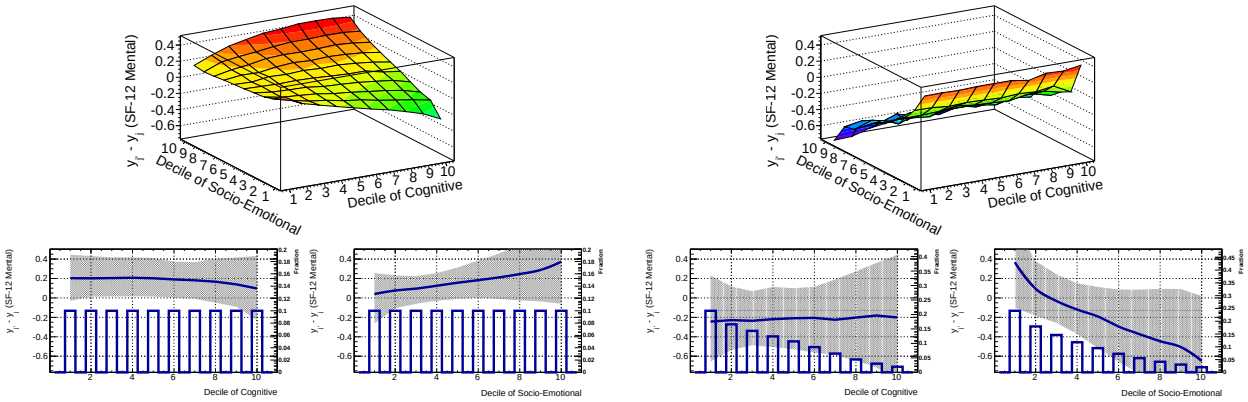


Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 24: Average Treatment Effect of Education on Mental Health (MCS-12) at Age 40, by *Decision Node* and Endowment Levels

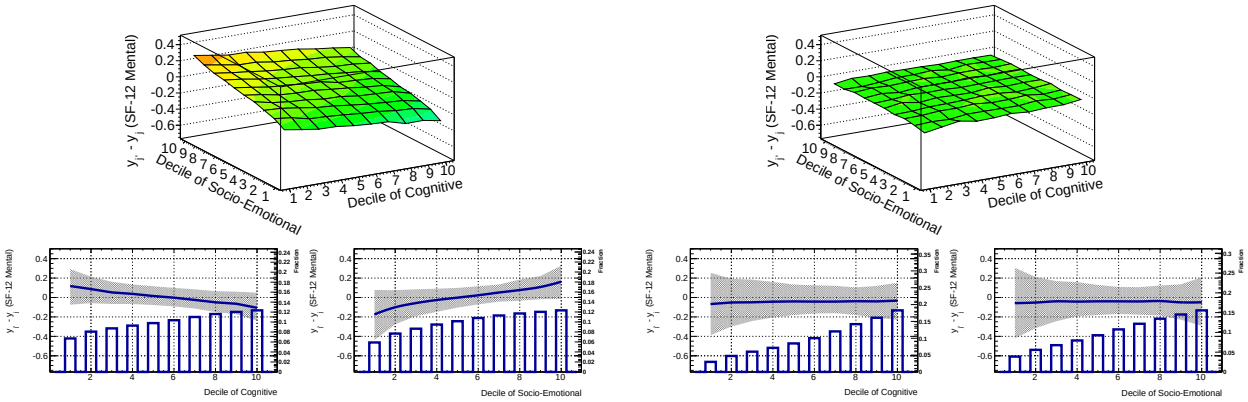
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

D. **Some College** vs. **4-year college degree**

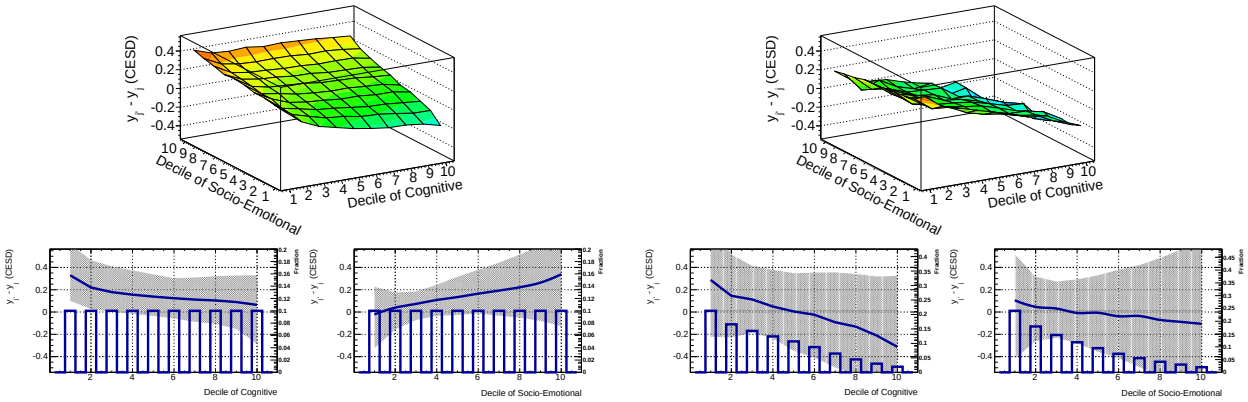


Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

Figure 25: Average Treatment Effect of Education on Depression (Reverse Score), by *Decision Node* and Endowment Levels

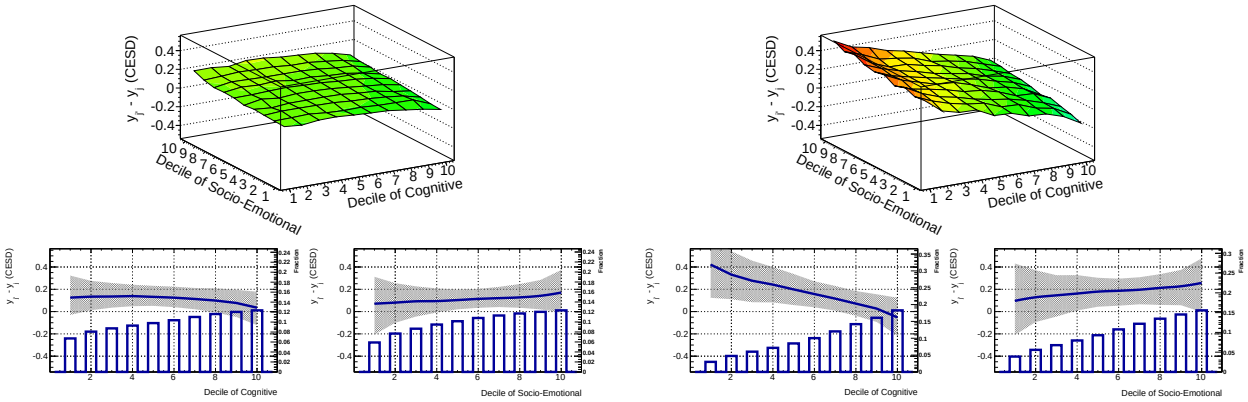
A. Dropping from HS vs. Graduating from HS

B. **HS Dropout** vs. Getting a GED



C. **HS Graduate** vs. College Enrollment

D. **Some College** vs. **4-year college degree**



Notes: Each panel in this figure studies the average effect of an educational decision for those individuals visting the decision node. Importantly, each schooling level might provide the option to pursue higher schooling levels, while final schooling levels do not provide an option. Final schooling levels are highlighted using bold letters. For each educational decision node, the first figure (top) presents $ATE_{j,j''}\left(\boldsymbol{\theta} \in (d^C, d^{SE})\right)$ where d^C and d^{SE} denote the cognitive and socioemotional deciles computed from the marginal distributions of cognitive and socioemotional endowments for the full population. The second figure (bottom left) presents $ATE_{j,j''}\left(\theta^C \in d^C\right)$ so that the socioemotional factor is integrated out. The bars in this figure display the fraction of individuals visiting the node in each decile of cognitive endowment. The last figure (bottom right) presents $ATE_{j,j''}\left(\theta^{SE} \in d^{SE}\right)$ and the fraction of individuals visiting the node in a given decile of socioemotional endowment.

N Identification of latent factor model

Identification of our factor model follows from a more general identification of correlated factor models presented in Williams (2011). He shows that the general system of five measures $M_1, ..., M_5$ and two correlated factors $\theta = (\theta^C, \theta^{SE})$ based on an adaptation of Anderson and Rubin (1956) can be identified nonparametrically given one dedicated measure of θ^C and one dedicated measure of θ^{SE}. This system of equations can be expressed as:

$$
\begin{aligned}
M_1 &= \alpha_1 \theta^C + \varepsilon_1 \\
M_2 &= \beta_2 \theta^{SE} + \varepsilon_2 \\
M_3 &= \alpha_3 \theta^C + \beta_3 \theta^{SE} + \varepsilon_3 \\
M_4 &= \alpha_4 \theta^C + \beta_4 \theta^{SE} + \varepsilon_4 \\
M_5 &= \alpha_5 \theta^C + \beta_5 \theta^{SE} + \varepsilon_5
\end{aligned}
$$

The proof for the non-parametric identification of the factor distribution can be found in Cunha, Heckman, and Schennach (2010). Identification of a model with a third factor uncorrelated with the other two factors is straightforward if there are three or more measurements on this factor.

For the three-factor models used in Section F.2, the factor system is rotated so that the factors are uncorrelated. The measurement system is constructed in the following way:

$$
\begin{aligned}
M_j &= \alpha_j \theta_1 + \varepsilon_j, \forall j \in \mathcal{J}_1 \\
M_j &= \alpha_j \theta_1 + \beta_j \theta_2 + \varepsilon_j, \forall j \in \mathcal{J}_2 \\
M_j &= \alpha_j \theta_1 + \beta_j \theta_2 + \eta_j \theta_3 + \varepsilon_j, \forall j \in \mathcal{J}_3
\end{aligned}
$$

where $\mathcal{J}_1$ is the set of at least three measures that are informative of the first factor, $\mathcal{J}_2$ is the set of at least three measures that has information about the second factor and $\mathcal{J}_3$ is the set of at least three measures that are informative about the third factor. Williams (2011) shows that this measurement system is also identified.

N.1 Specification of the measurement system

When estimating the factor model, we must make normalizations and exclusion restrictions. There is no precise method for determining these restrictions. As laid out below, we use a collection of empirical evidence and theory for determining our measurement system.

Factors have no natural scale. To address this, we normalize one loading for each factor to unity. This normalization does not affect the relative loadings of the two factors, but rather determines the units in which the factors are measured. We normalize the measure that has the largest correlation with the other measures. In the case of our paper, we normalize the cognitive loading to one for the arithmetic reasoning ASVAB measure and we normalize the socioemotional loading to one for the language arts grade measure. Switching the normalization to the loadings on other measures has no substantive effect on the results.

Following Heckman, Stixrud, and Urzua (2006), the model imposes that the ASVAB measures do not load on socio-emotional factors. If any particular ASVAB score is excluded, it does not substantively change the analysis. Course grades are assumed to load on both the cognitive and socioemotional factors. As discussed in the main paper, this assumption by Duckworth and Seligman (2005) and Borghans, Golsteyn, Heckman, and Humphries (2011), who both find that grades are largely determined by skills other than cognitive ability.

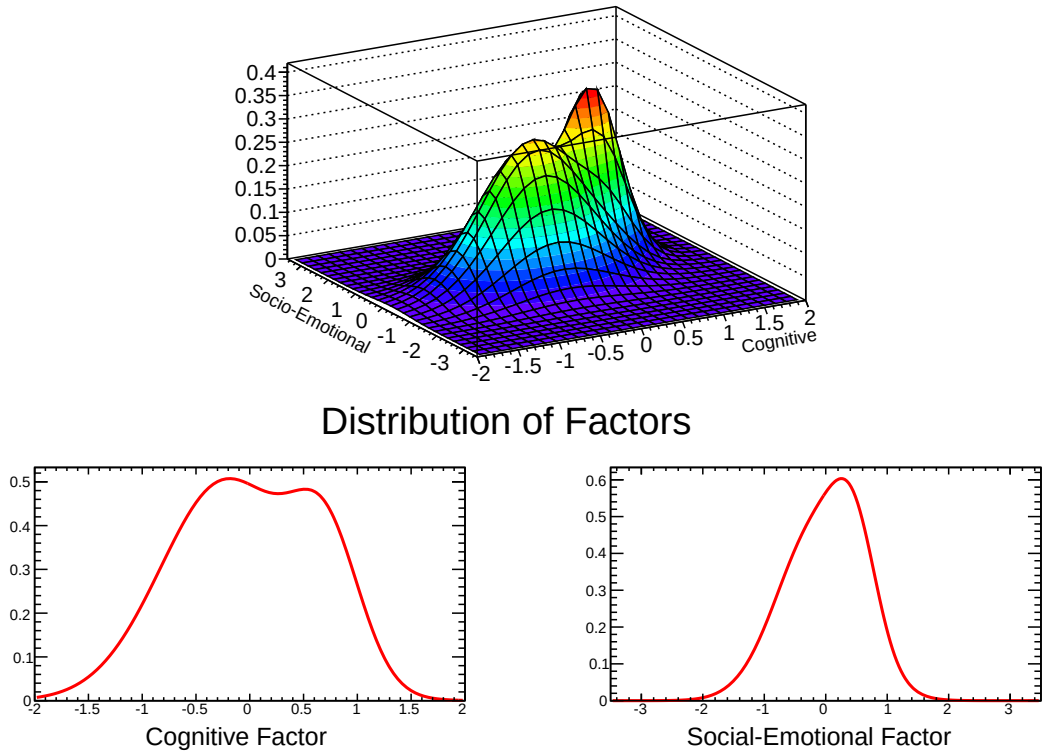
As discussed above, the identification strategy used in the paper requires one measure that loads exclusively on cognitive ability, and one measure that loads exclusively on socioemotional ability. The paper uses a single measure of early reckless behavior as the measure that loads exclusively on cognition. Other early-life behaviors were considered: violent behavior in 1979, regular smoking by age 15, regular drinking by age 15, use of marijuana by age 15, and sexual intercourse by age 15. Each of these measures has a low and statistically insignificant correlation with AFQT scores in the data ($\mid \rho \mid < 0.05$). We use reckless behavior as our exclusion restriction and as the only behavior we include in the measurement system for two reasons: (1) It is unlikely to have a direct effect on schooling choices; (2) It is unlikely to have a direct effect on the adult outcomes being considered. Estimating the model using (a) an alternative measure of early behavior as the exclusion restriction or (b) including all of the early behaviors in the model did not substantively change our findings.

We include violent behavior, smoking regularly by age 15, drinking regularly by age 15, ever smoking marijuana by age 15, and sexual intercourse by age 15 as early "outcomes" in our model. These do not inform the cognitive or socioemotional factor but provide a robustness check of our interpretation of our factors. In these robustness checks, the socioemotional factor plays a large and statistically significant role in each behavior, supporting our classification of the second factor as a measure of socioemotional ability.

N.2 Distribution of factors

Figure 26 presents the estimated joint and marginal distributions of cognitive and socioemotional endowments. The estimated distributional parameters are presented at the bottom of the figure.

Figure 26: Distribution of Cognitive and Socio-emotional Endowments



$$\begin{bmatrix} \theta^C \\ \theta^{SE} \end{bmatrix} \sim p_1 \Phi\left(\mu_1, \mathbf{\Sigma}_1\right) + p_2 \Phi\left(\mu_2, \mathbf{\Sigma}_2\right)$$

where

$$\mathbf{\Sigma}_1 = \begin{pmatrix} 0.10 & 0 \\ 0 & 0.12 \end{pmatrix}, \quad \mathbf{\Sigma}_2 = \begin{pmatrix} 0.37 & 0 \\ 0 & 0.43 \end{pmatrix},$$

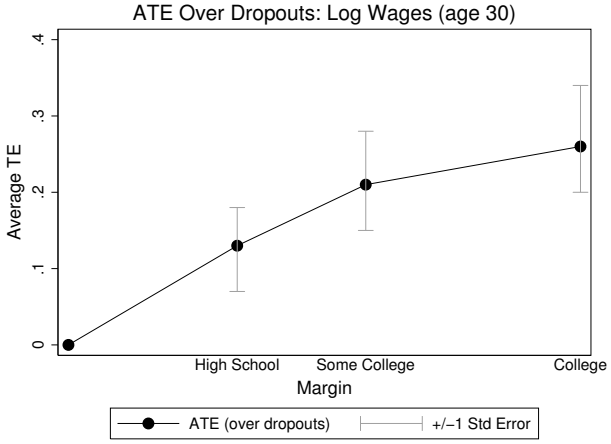
$$\mu_1 = \begin{pmatrix} 0.70 \\ 0.50 \end{pmatrix}, \quad \mu_2 = \begin{pmatrix} -0.21 \\ -0.15 \end{pmatrix}$$

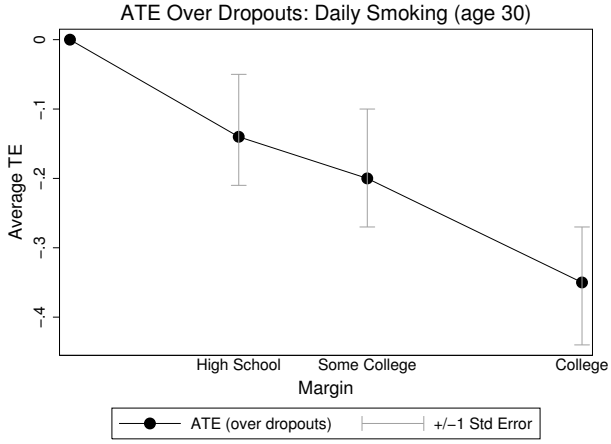
$$\mathbf{p} = (0.23,\ 0.77)$$

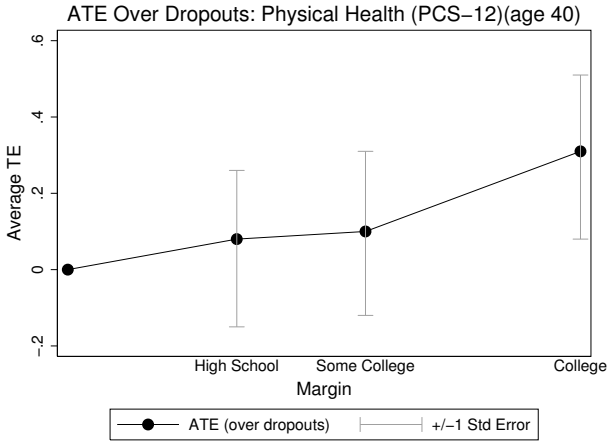
$$\rho = 0.24$$

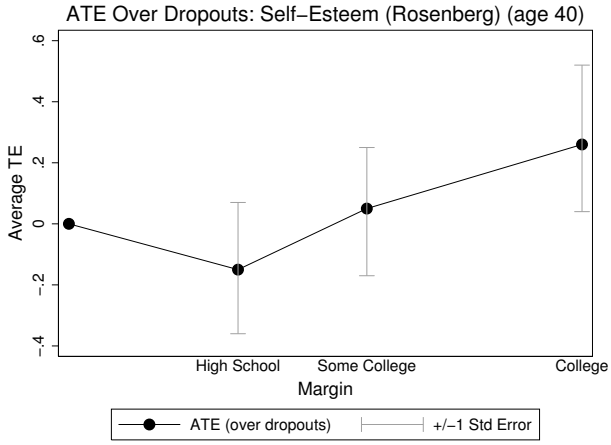
O Linearity of treatment effects with respect to years of schooling

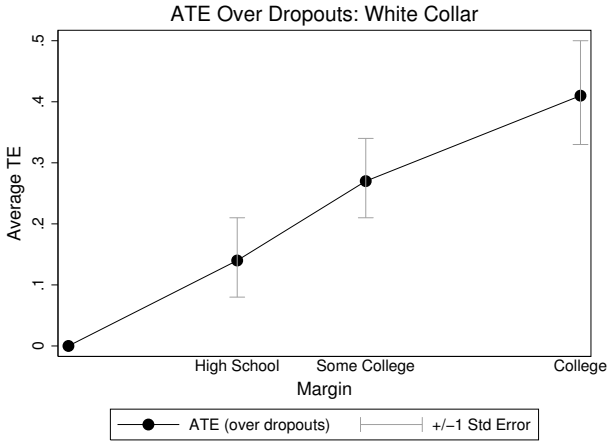
This section plots the ATE comparing each level of schooling to remaining a dropout. The effects are spaced on the x-axis according to the average number of additional years of schooling obtained by those holding that educational status as their highest level of education. The linearity of the line connecting the various effects provides informal evidence for or against the linearity of the gains to education in years of completed schooling.

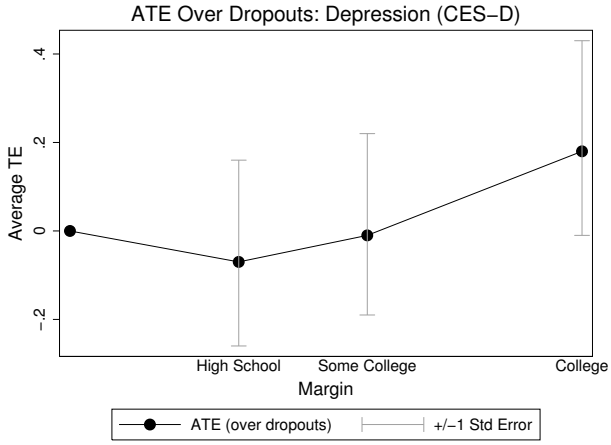


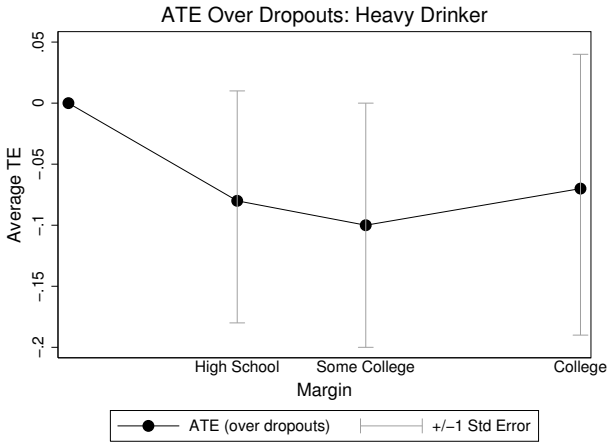


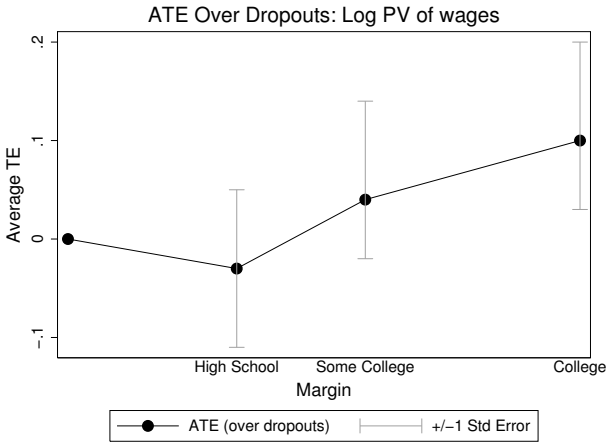


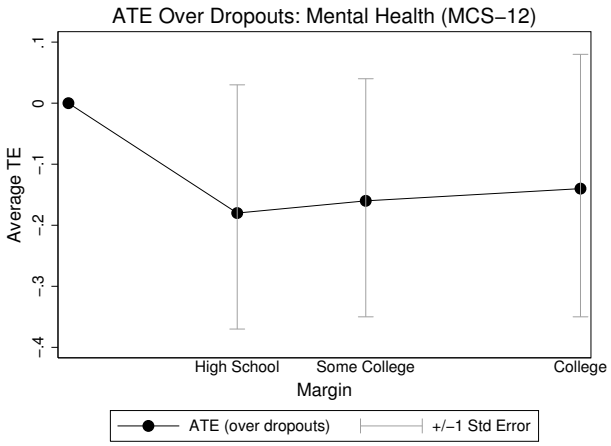


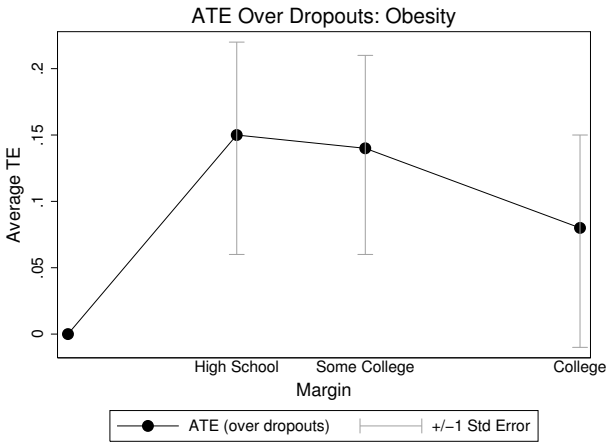


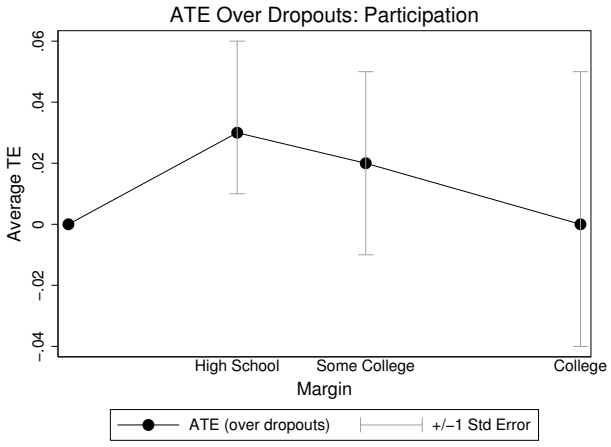


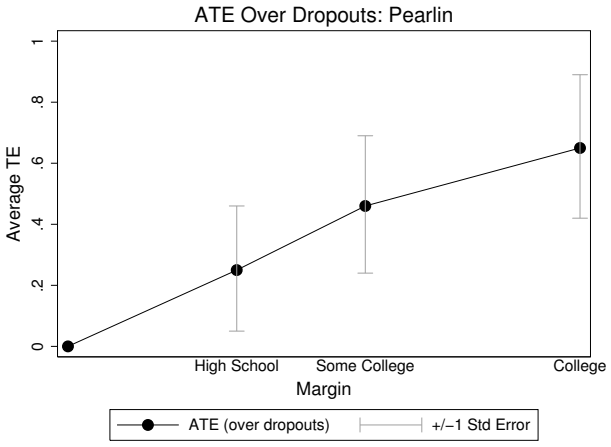

ATE Over Dropouts: Heavy Drinker
Average TE
−.2
−.15
−.1
−.05
0
.05
High School
Some College
College
Margin
ATE (over dropouts)
+/−1 Std Error


ATE Over Dropouts: Log PV of wages
Average TE
−.1
0
.1
.2
High School
Some College
College
Margin
ATE (over dropouts)
+/−1 Std Error


ATE Over Dropouts: Mental Health (MCS−12)
Average TE
−.4
−.3
−.2
−.1
0
.1
High School
Some College
College
Margin
ATE (over dropouts)
+/−1 Std Error


ATE Over Dropouts: Obesity
Average TE
0
.05
.1
.15
.2
High School
Some College
College
Margin
ATE (over dropouts)
+/−1 Std Error


ATE Over Dropouts: Participation
Average TE
−.04
−.02
0
.02
.04
.06
High School
Some College
College
Margin
ATE (over dropouts)
+/−1 Std Error


ATE Over Dropouts: Pearlin
Average TE
0
.2
.4
.6
.8
1
High School
Some College
College
Margin
ATE (over dropouts)
+/−1 Std Error

P Policy Relevant Treatment Effects

Table 146: PRTE: Standard Deviation Decrease in Tuition on College Enrollment

	PRTE	4-year degree	no 4-year degree
Log Wages	0.12	0.14	0.11
PV Log Wages	0.13	0.13	0.12
Physical Health	0.10	0.13	0.09
Self-Esteem	0.22	0.15	0.27
Smoking	-0.13	-0.16	-0.11
Mental Health	0.02	0.00	0.04
Depression	0.11	0.11	0.11
Pearlin	0.24	0.20	0.27
LF Participation	-0.01	-0.01	-0.01
White Collar Emp.	0.24	0.28	0.21
Obesity	-0.05	-0.08	-0.03
Heavy Drinking	-0.03	-0.05	-0.01

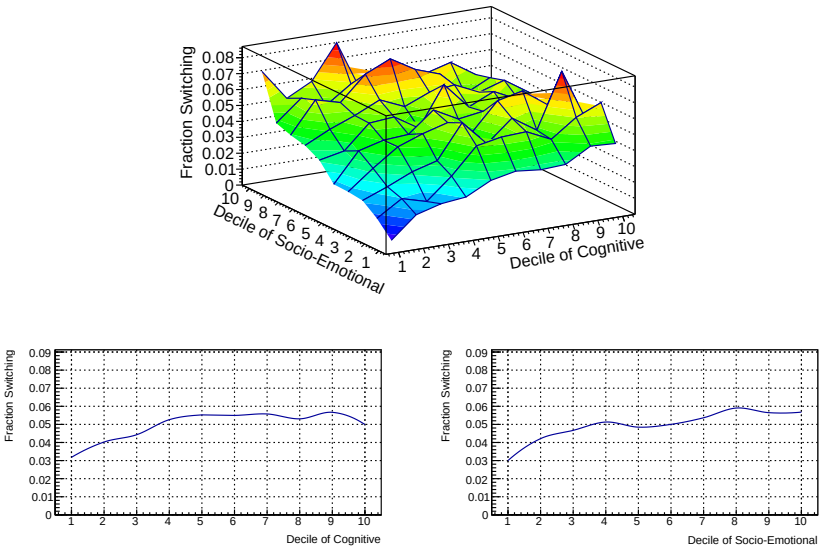
Notes: Table shows the policy relevant treatment effect (PRTE) of reducing tuition by a standard deviation (approx. $7,500) on college enrollment. The PRTE is the average treatment effect of those induced to change educational choices as a result of the policy: $PRTE_{p,p'} \equiv \int\int E(Y^p - Y^{p'}|\mathbf{X}=\mathbf{x}, \boldsymbol{\theta}=\overline{\boldsymbol{\theta}}), dF_{\mathbf{X},\boldsymbol{\theta}}(\mathbf{x}, \overline{\boldsymbol{\theta}}|S(p) \neq S(p'))$. Column 1 shows the overall PRTE. Column 2 shows the PRTE for those induced to enroll by the policy who then go on to complete 4-year college degrees. Column 3 shows the PRTE for individuals induced to enroll but who do not complete 4-year degrees.

Table 147: PRTE: Standard Deviation Decrease in Tuition on College Enrollment (average gains over whole population)

	PRTE	4-year degree	no 4-year degree
Log Wages	0.0061	0.0027	0.0034
PV Log Wages	0.0062	0.0026	0.0036
Physical Health	0.0048	0.0024	0.0024
Self-Esteem	0.0109	0.0079	0.0030
Smoking	-0.0064	-0.0033	-0.0032

Notes: Table shows the policy relevant treatment effect (PRTE) of reducing tuition by a standard deviation (approx. $7,500) on college enrollment. The PRTE here is the gains from the policy averaged over the whole population: $PRTE_{p,p'} \equiv \int\int E(Y^p - Y^{p'}|\mathbf{X}=\mathbf{x}, \boldsymbol{\theta}=\overline{\boldsymbol{\theta}}), dF_{\mathbf{X},\boldsymbol{\theta}}(\mathbf{x}, \overline{\boldsymbol{\theta}})$. Column 1 shows the overall PRTE. Column 2 shows the PRTE for those induced to enroll by the policy who then go on to complete 4-year college degrees. Column 3 shows the PRTE for individuals induced to enroll but who do not complete 4-year degrees.

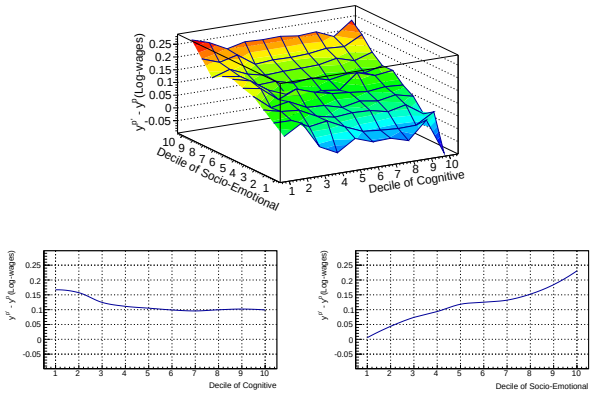
Figure 27: PRTE: Proportion of each decile pair induced to switch education by policy



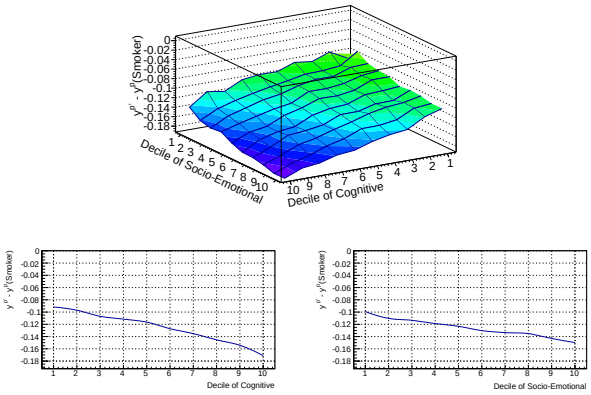
Notes: These figures show the proportion of each decile pair induced to switch final schooling levels by a $7,500 tuition subsidy at the beginning of college.

Figure 28: PRTE: Average gains of those induced to change by schooling level by deciles of cognitive and socioemotional ability. ($7,500 college subsidy)

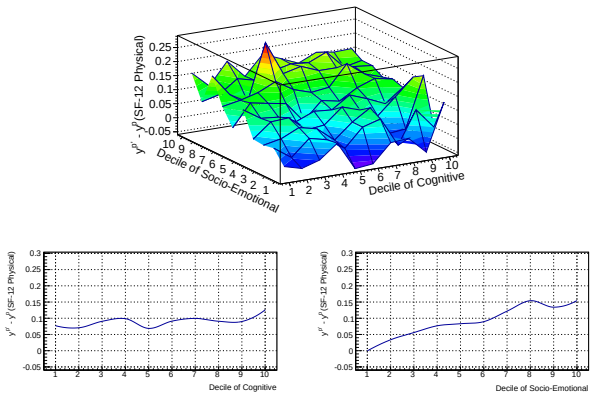
(a) wages



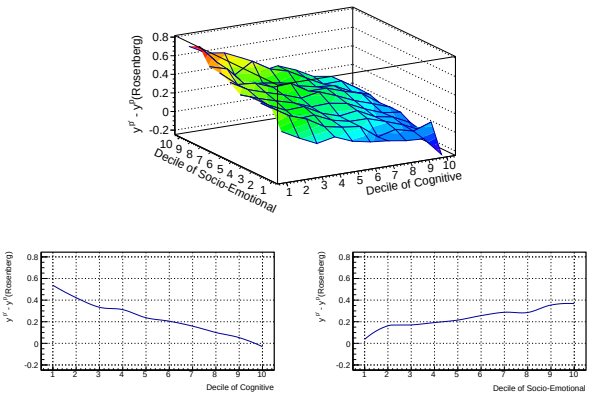
(b) smoking



(c) Physical Health



(d) Self-esteem



Notes: These figures show the average gains by decile from those induced to change educational levels by a $7,500 tuition subsidy at the beginning of college.

Q Marginal Treatment Effects

This section provides plots of the marginal treatment effects (MTE). The MTE is the average treatment effect for individuals with specific values of their unobservable $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$ combines the two components not directly observed by the economists. The MTE is restricted to individuals who are at the particular educational choice and whose unobservables take on a particular value. Specifically:

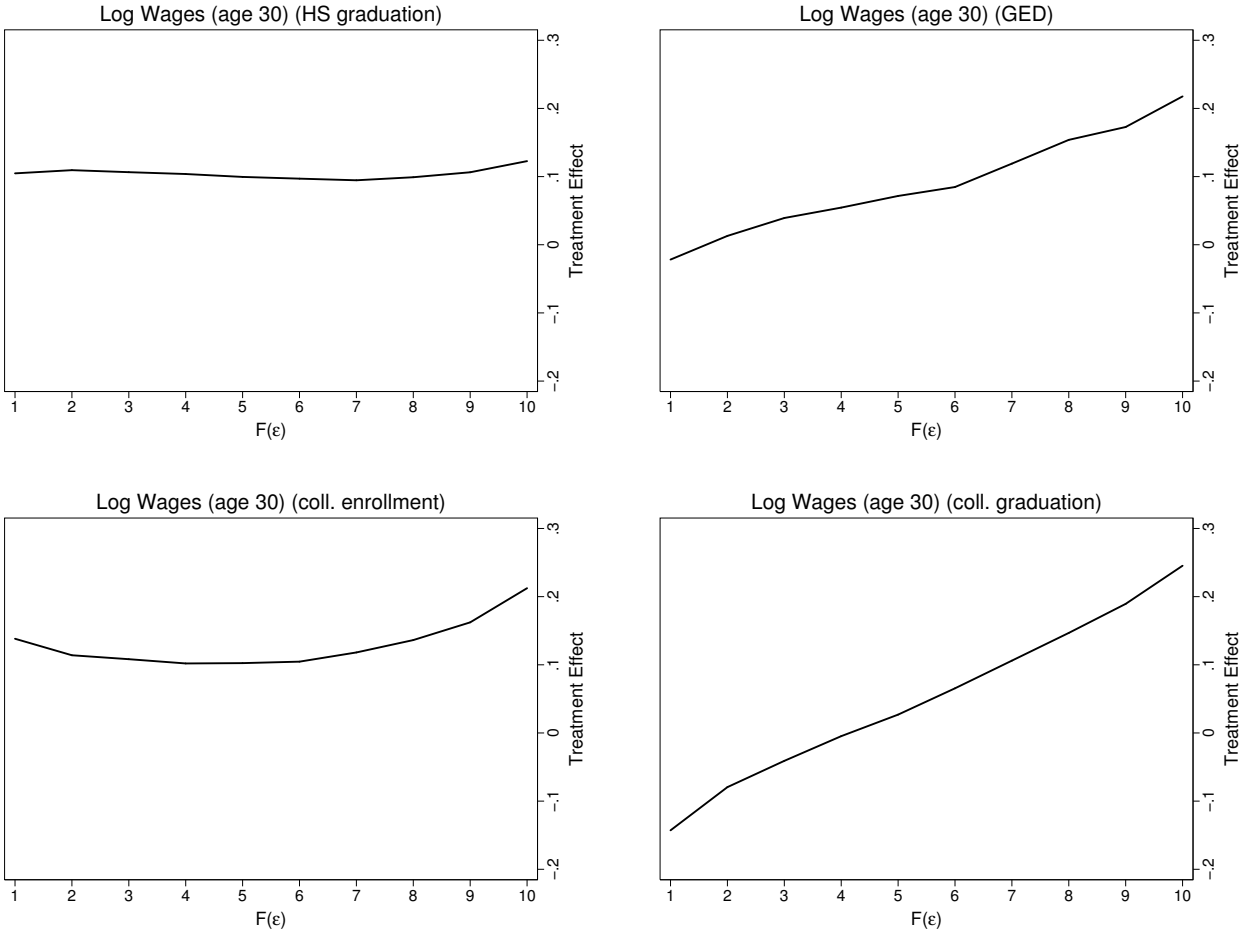
$$\Delta^{MTE}_{j,j'}(\mu) \equiv \iint \Delta_{j,j'}[Y|\mathbf{X} = \mathbf{x}, \boldsymbol{\theta} = \overline{\boldsymbol{\theta}}]\, dF_{\mathbf{X},\boldsymbol{\theta}}(x, \bar{\theta}|F(\epsilon) = \mu, Q_{j,j'} = 1), \tag{1}$$

The plots below show the returns to a particular schooling choice over the cumulative distribution function of $\epsilon_{j,j'}$; $F(\epsilon_{j,j'})$.

Rather than displaying the treatment effect by deciles of cognitive and socioemotional ability (as done in the 3D plots above), these plots show the treatment effect by decile of the aggregate latent variable which influences the choice. $F(\epsilon_{j,j'})$ is calculated for the population that makes the particular educational choice being considered, and the treatment effects include the potential continuation value associated with schooling.

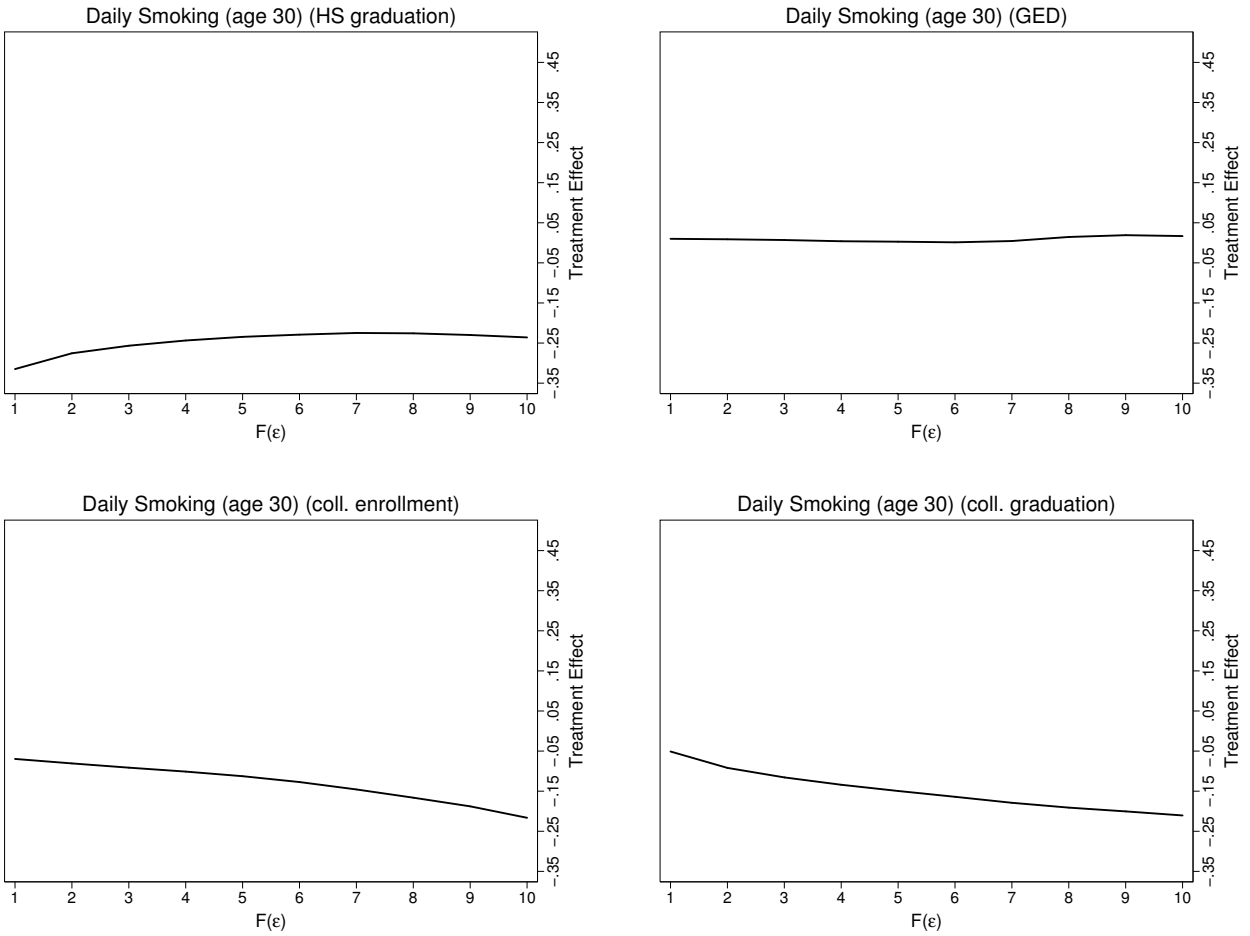
Main Outcomes

Figure 29: Log Wage - Marginal Treatment Effects



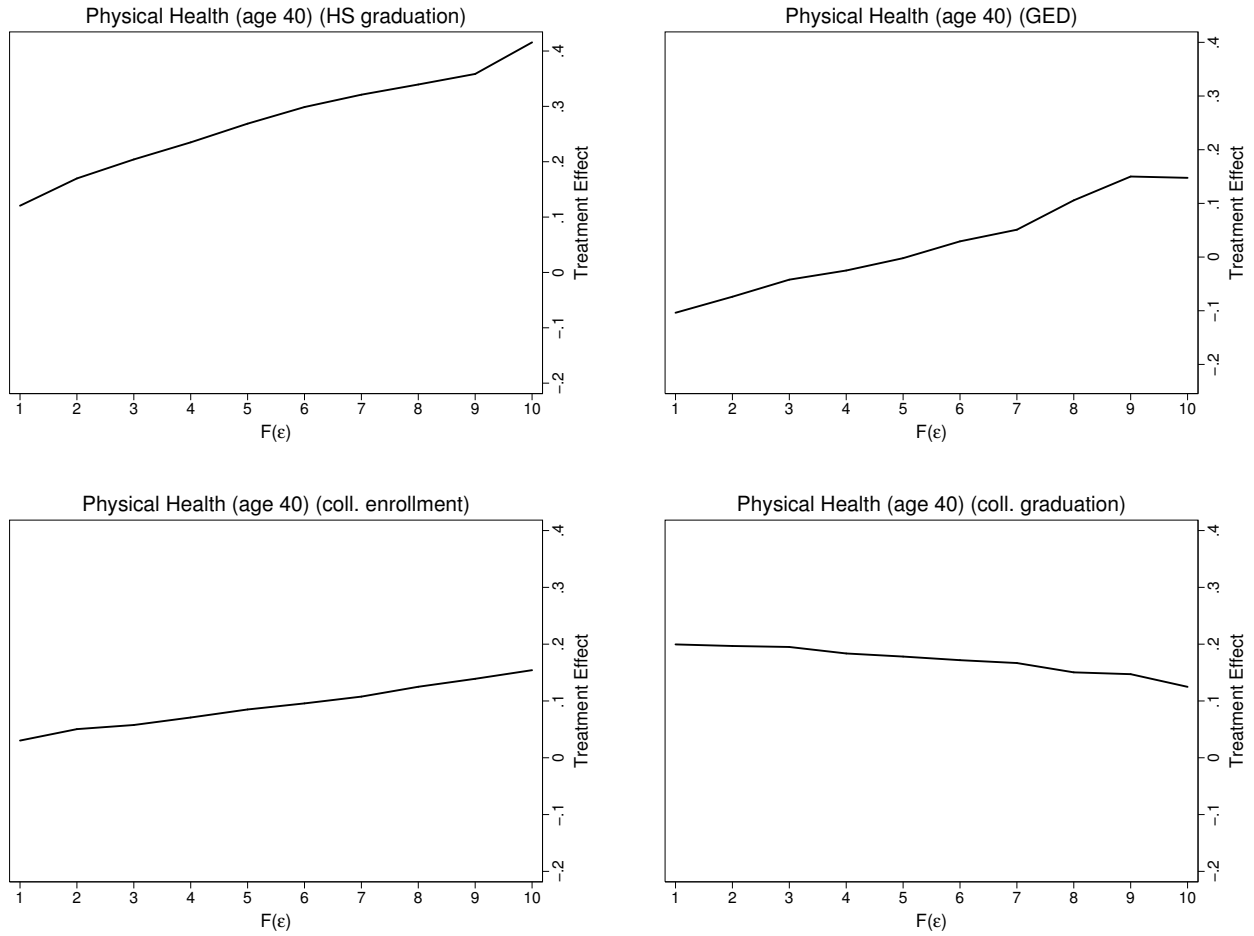
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

Figure 30: Daily Smoking - Marginal Treatment Effects



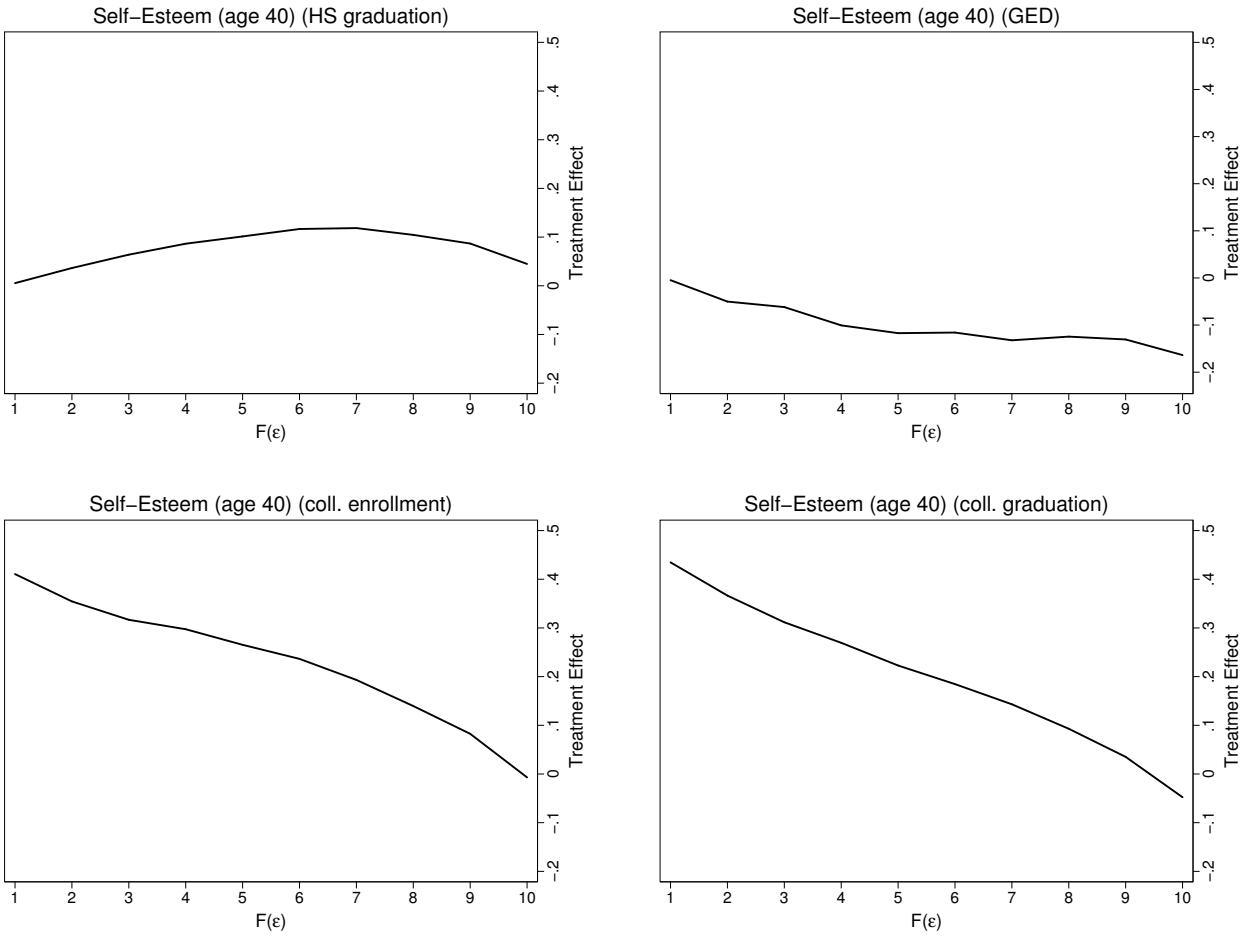
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

Figure 31: Physical Health - Marginal Treatment Effects



Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

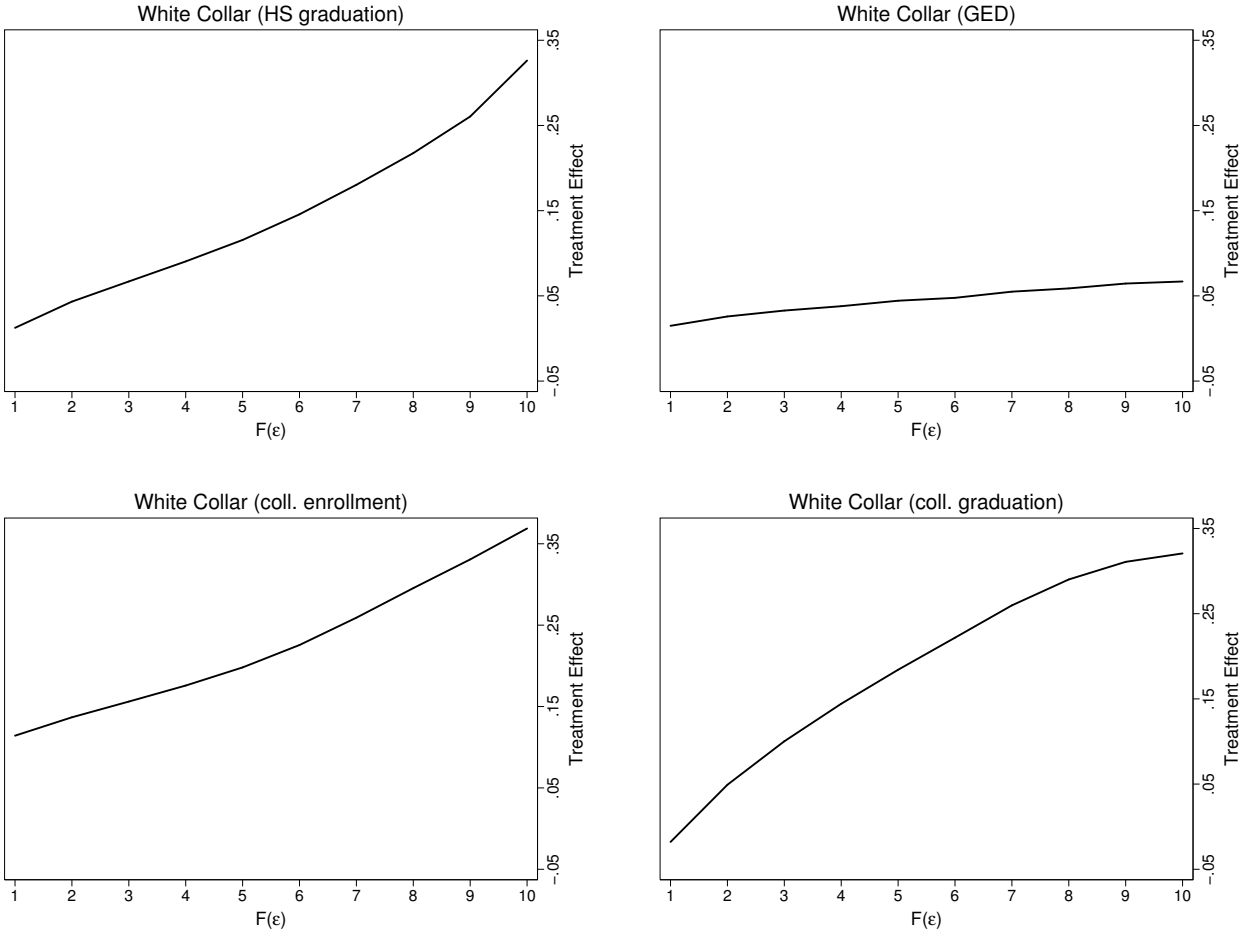
Figure 32: Self-Esteem - Marginal Treatment Effects



Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

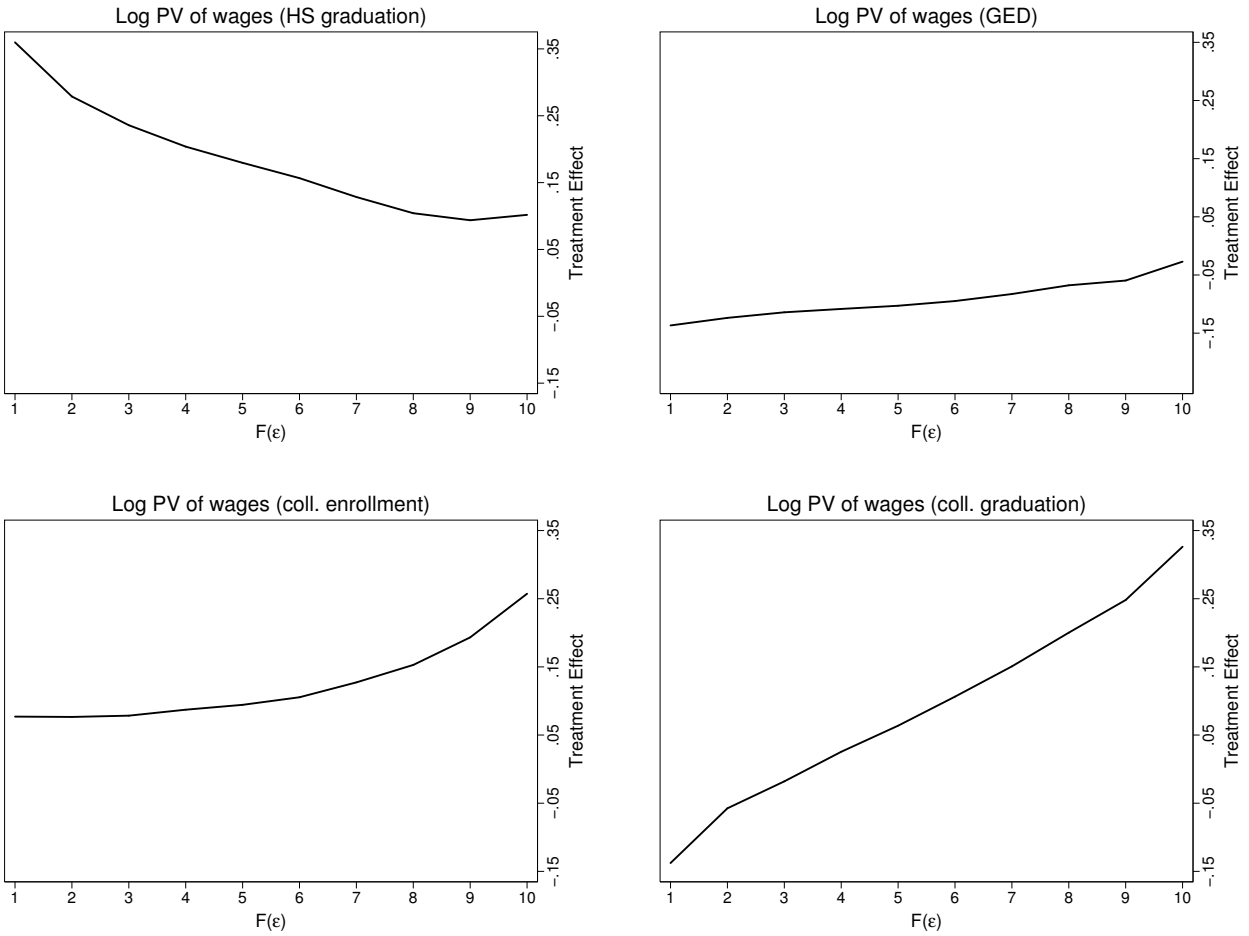
Additional Outcomes

Figure 33: White Collar Employment- Marginal Treatment Effects



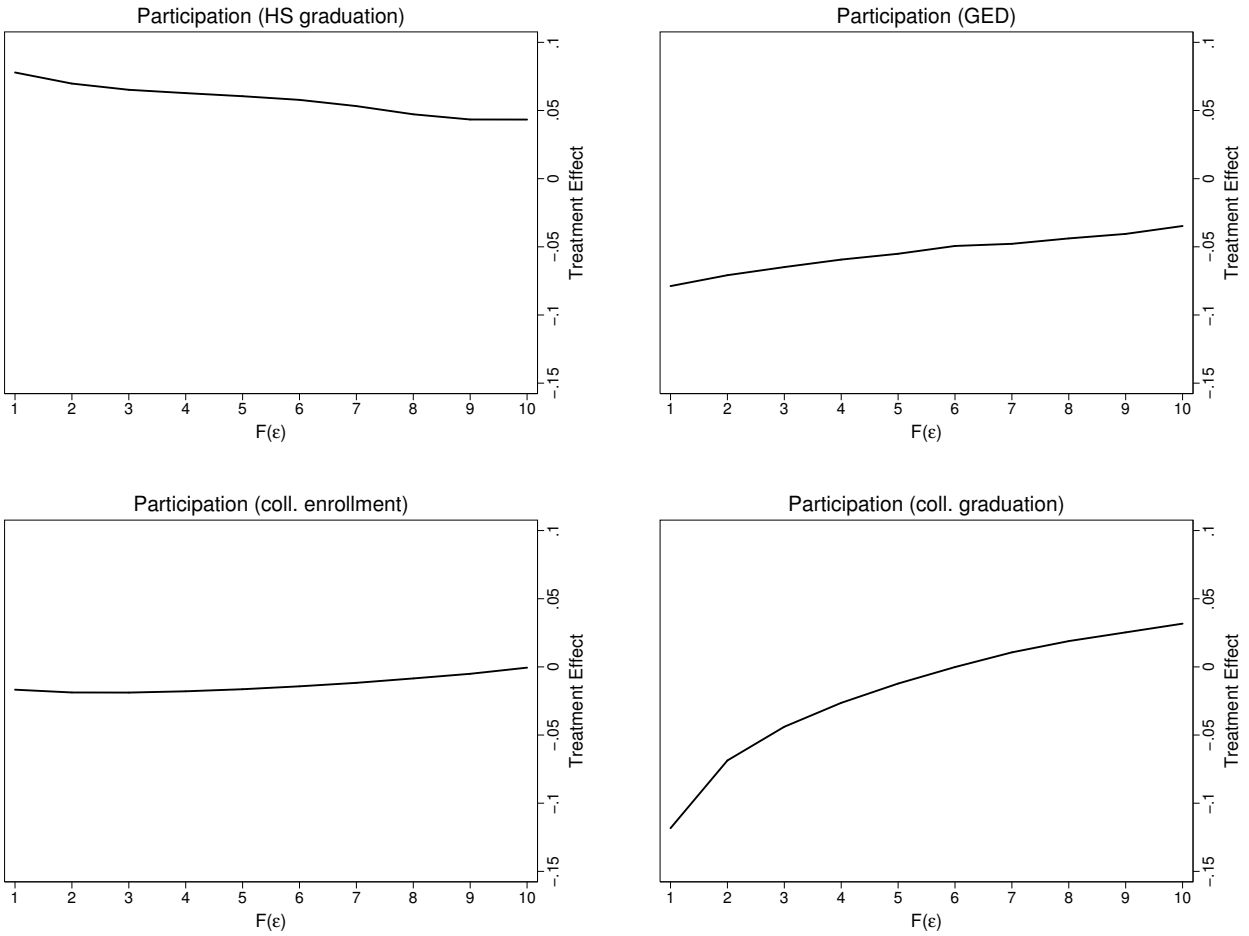
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

Figure 34: PV Log Wages - Marginal Treatment Effects



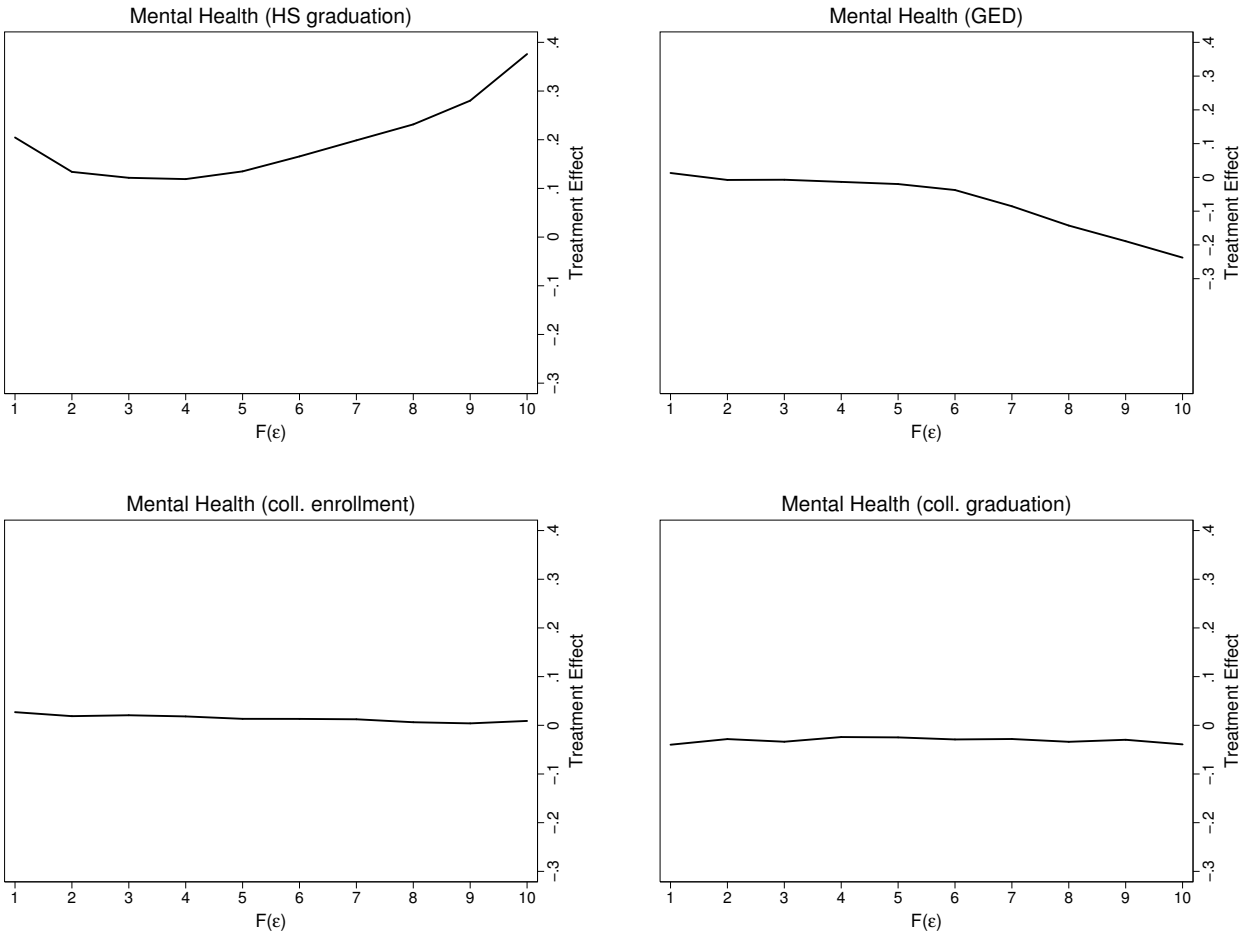
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

Figure 35: LF Participation - Marginal Treatment Effects



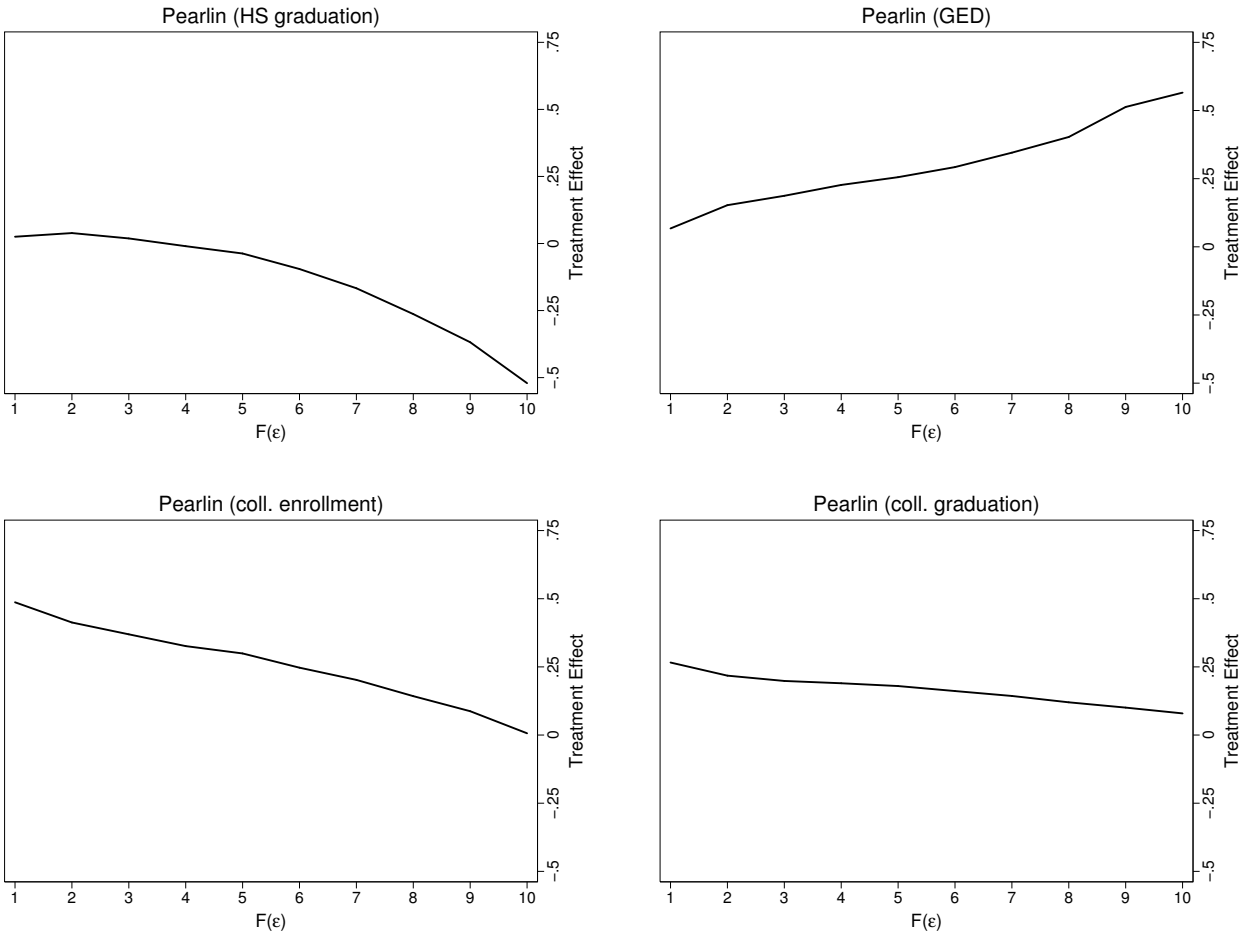
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

Figure 36: Mental Health - Marginal Treatment Effects



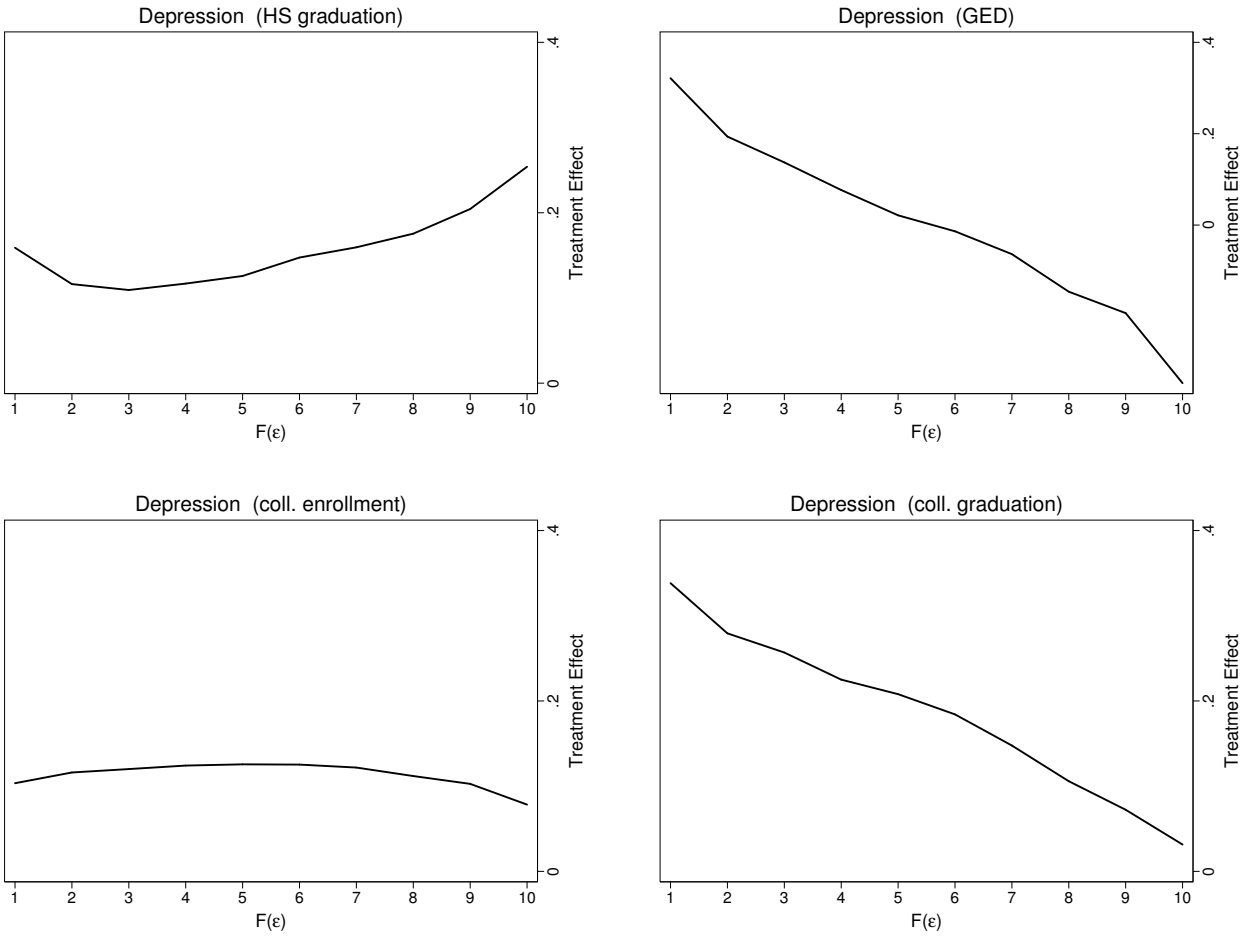
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^{j}_{j,j'} - \nu^{j}_{j,j'}$.

Figure 37: Pearlin- Marginal Treatment Effects



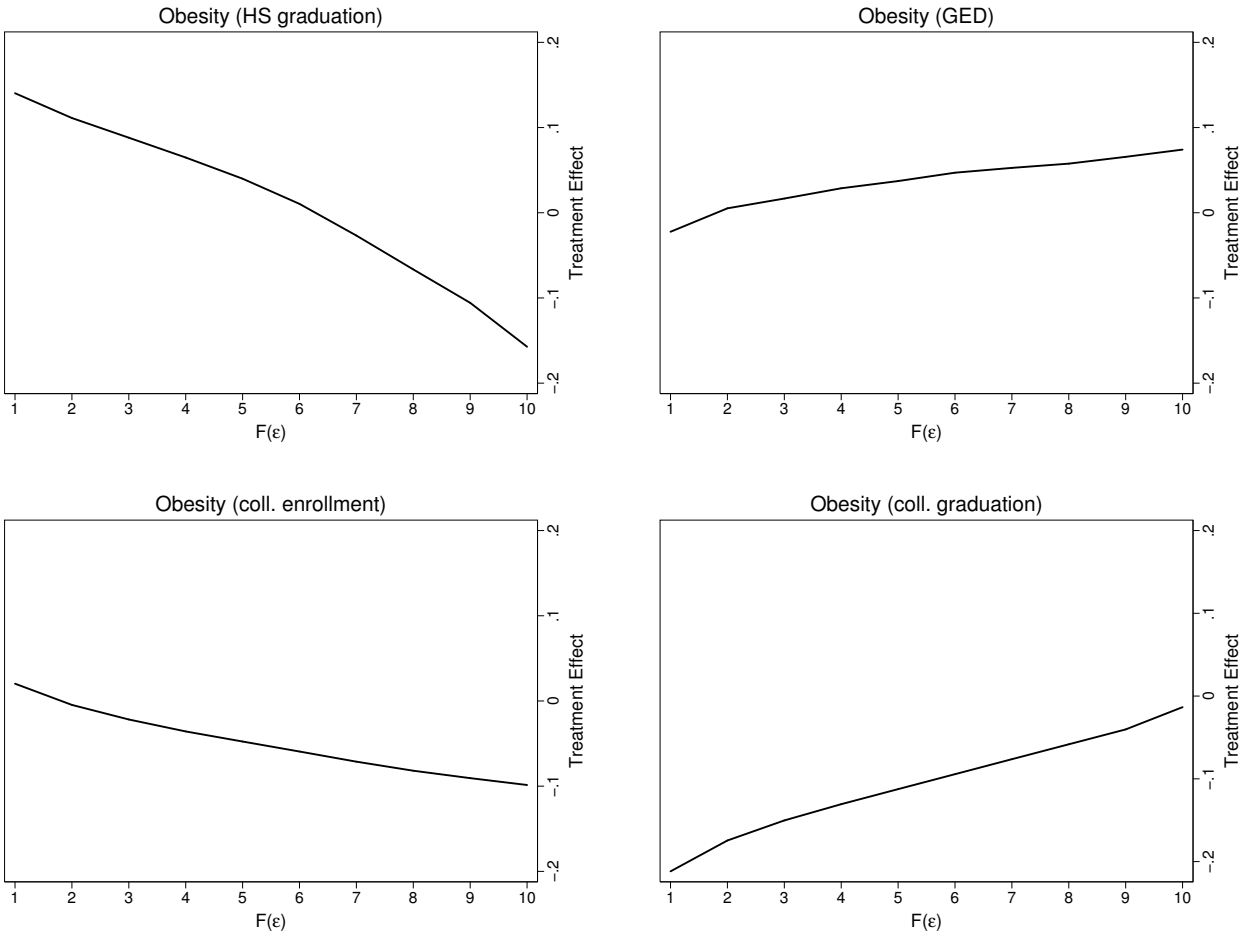
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^{j}_{j,j'} - \nu^{j}_{j,j'}$.

Figure 38: Depression - Marginal Treatment Effects



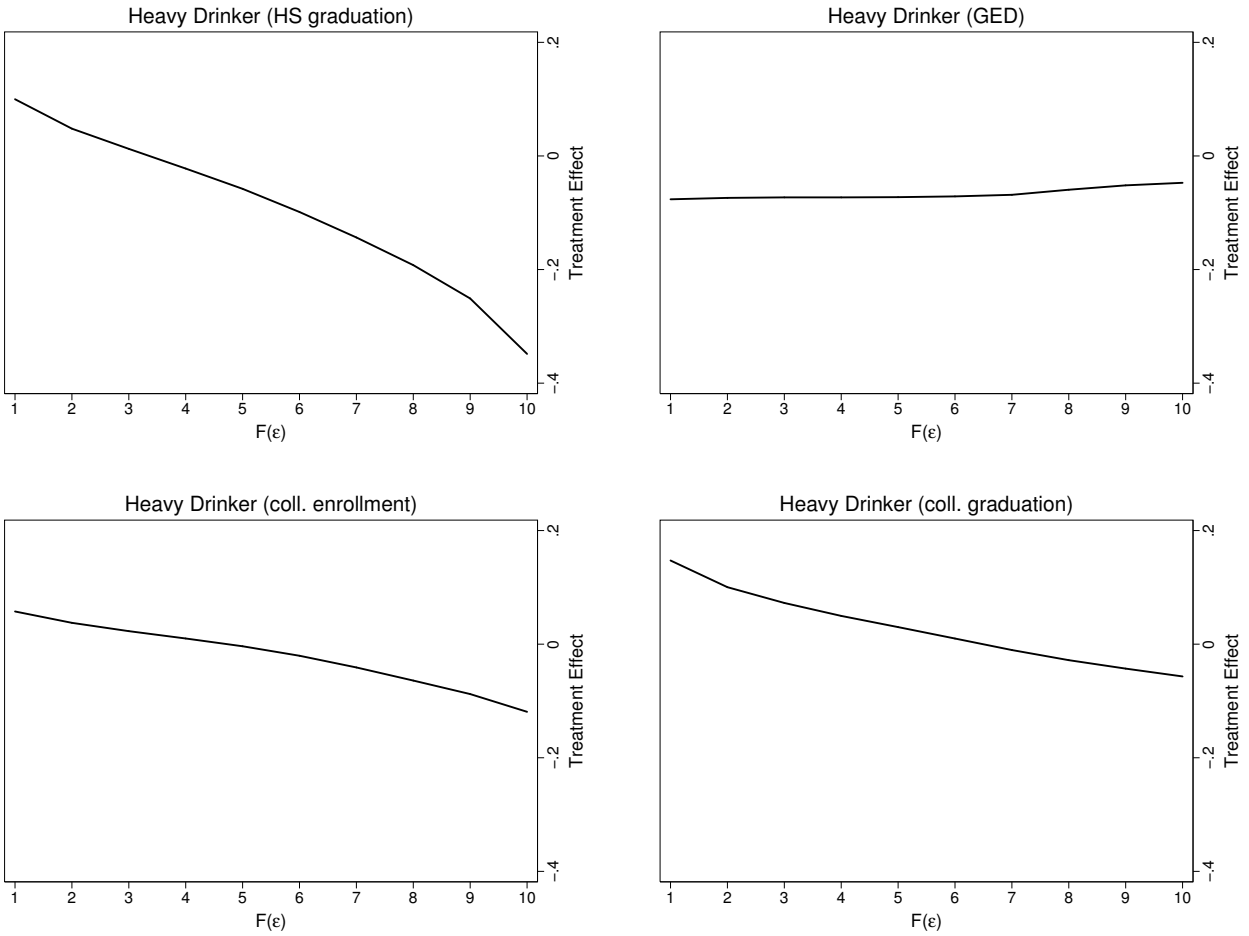
Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

Figure 39: Obesity - Marginal Treatment Effects



Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^j_{j,j'} - \nu^j_{j,j'}$.

Figure 40: Heavy Drinking - Marginal Treatment Effects



Notes: Each sub-plot shows a particular educational choice. $F(\epsilon_{j,j'})$ is the CDF of $\epsilon_{j,j'}$, where $\epsilon_{j,j'} = \theta\alpha^{j}_{j,j'} - \nu^{j}_{j,j'}$.

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