

## **Preparing for an uncertain economy: How occupational expectations, academic preparation, and labor market fluctuations predict suicide by midlife**

The alarming increase in mortality rates among middle age white Americans in recent years is partially driven by an increase in suicide rates for this population (Case and Deaton 2015). Suicide has long been a topic of interest among public health scholars as a preventable cause of death and among sociologists as a mental health outcome shaped by social forces. The majority of work examining how social forces matter for suicide has focused on social integration; however, recent scholarship suggests that failure to meet expectations can play a role in suicide (Mueller and Abrutyn 2016; Abrutyn and Mueller 2018). With this study, we examine whether adolescent's occupational expectations combined with changes in occupational opportunities in labor markets have consequences for suicide risk. We use the High School & Beyond dataset (HS&B), a nationally representative sample of sophomores and seniors in high school in the U.S. in 1980, matched to their mortality records in midlife to analyze the predictors of suicide by midlife for a cohort of individuals that experienced a shift in the occupational structure of the labor market during their adult lives.

Building on a new social-psychological Durkheimian theory of suicide (Mueller and Abrutyn 2016), we hypothesize that adolescents who expect and are prepared to enter a specific sector of the labor market are at increased risk of suicide later in life if the labor market share of this employment sector declined. In particular, we examine whether expecting to end up in an occupation that ultimately declined in labor market share during adulthood predicts suicide. We further investigate the role of academic preparation in high school and the more general labor market expectations of the high school community. This work has the potential to provide insights on how the link between economic downturns, expectations, and suicide operates and the role of schools in preparing students for the uncertainty of labor markets in adulthood.

### **Research Questions:**

1. Do adolescents who expected an occupation that ultimately decreased in labor market share when they reached adulthood have higher rates of suicide by midlife?
2. Are students with advanced academic preparation during high school protected against suicide in midlife?
3. What role do community-level labor market expectations play in protecting individuals from suicide by midlife?

### **Occupational Expectations and Labor Market Uncertainty**

A major tenant in today's view of education is that students are being trained for jobs that do not exist yet. Flexible skills, like analytic and communication skills, are favored over specific vocational training. Yet, students form ideas of what their occupations may be during adolescence with little information about how the labor market may change as they enter and progress through adulthood (Orrange 2007; Beck 1992). Adolescents use the limited information they have, based on the expectations of their community, their parents, and their peers, to form ideas about how they expect their careers to unfold. Part of forming occupational expectations is forming identities around the labor market and what type of life you expect to be able to live (Becker 1993).

However, the types of occupations that supported middle class lifestyles during high school may not support the same lifestyle later in life. For example, the technological revolution

between 1980 and 2000 changed the structure of the labor market, with jobs that required routine, manual skills disappearing as skilled occupations increased in their labor market share (Autor, Levy, and Murnane 2003). Adolescents that grew up in blue collar communities may have expected to achieve blue collar employment and a decent living as adults, but that was no longer possible after the labor market shifted. Occupations that require more analytic and flexible skills have been taking up an increasing share of the labor market since this shift (Autor and Dorn 2009). Thus, adolescents who expected an occupation that declined in labor market share after high school may not have achieved that expectation or the life they expected to have as an adult. There are many ways these individuals may have reacted to this change—from instrumental life changes, such as returning to school for more training or migrating to parts of the country with better job opportunities, to emotional reactions, such as depression and suicide.

### **Labor Market and Suicide**

Research has found that broad labor market fluctuations predict suicide. For example, male suicide rates increased after an economic downturn in Portugal and during times of economic crisis in Asian countries (Pereira dos Santos et al. 2016; Chang et al. 2009). In fact, the World Health Organization warned of a potential increase in suicides after the crash in 2008 (WHO 2009). Individuals who have had negative labor market experiences are also more likely to die by suicide than those who are employed in high status jobs (Min et al. 2015; Kim et al. 2015; Schneider et al. 2011). We propose that individuals who expected occupations that decreased in labor market share over their life course will have higher rates of suicide than those who expected occupations that increased in labor market share. For the cohort included in our study, high school students in 1980, the jobs that decreased in labor market share are mainly male-dominated, blue-collar occupations that decreased with the increase of computers. Thus, this process may operate differently for men, who were more likely to expect these jobs, than women, whose labor market plans often excluded these heavily male-dominated professions.

*Hypothesis 1: Adolescents who expected occupations that declined in labor market share after high school will have higher rates of suicide by midlife than those who expected occupations that increased in labor market share.*

### **Labor Market Preparation in High School**

During high school, students take courses to prepare them for their likely career trajectory—either directly into the labor force into lower-status occupations or to college for entry into higher status positions. Within these two potential post-high school pathways, there is variation in the academic preparation students receive. We examine if individuals who took more advanced coursework and had higher skills in high school are protected against suicide later in life. These students may have had the skills to adapt to the changes in the labor market, and adapted their plans in the face of uncertainty.

*Hypothesis 2: Adolescents who had advanced learning experiences in high school will have lower rates of suicide by midlife than those with only low-level learning experiences.*

### **High School Community and Suicide**

Although individual aspirations and skills may be related to suicide, a Durkheimian approach to suicide would suggest that the level of integration into the high school community

may also be related to later life suicide. We examine whether adolescents who had similar labor market expectations as other students in their school community are protected against suicide. Adolescents who expected occupations that ultimately declined in labor market share may be less likely to die by suicide if they are surrounded by other individuals experiencing the same labor market fluctuations and unmet expectations. Communities with a large proportion of students expecting these occupations may have more resources to help these individuals adapt to the changing labor market demands.

*Hypothesis 3: Adolescents who expected occupations that declined in labor market share will have lower rates of suicide in school communities with more students that shared their occupational expectations.*

### **Methods**

Our sample consists of the senior and sophomore cohorts from the panel sample of the HS&B longitudinal study matched with mortality records. We excluded participants that died before the age of 25, leaving us with an analytic sample of 26,670<sup>1</sup>. Not only did those participants not live long enough to participate in the early adulthood follow-up surveys, but we expect that there are different mechanisms driving suicide before and after early adulthood. We additionally display our analyses with only men represented in our sample (N=12,910) because men are more likely to complete suicide and were more likely to expect an occupation that declined in labor market share.

### **Measures**

*Mortality by Midlife:* HS&B cohort members' mortality status and cause of death was ascertained via links to the National Death Index as well as supplementary information from internet searches, genealogical websites, credit bureau databases, and online obituaries (See Warren et al. 2017 for more details). Our outcome variable is a categorical variable indicating whether the respondent was not found dead, died by other means, or died by suicide before age 50/52. There were approximately 70 men and 20 women who died by suicide between early adulthood and midlife.

*Occupational Expectations:* In their respective senior years, the students were asked what occupational expectations they had for themselves at age 30. Students were given a list of 17 broad occupational categories (e.g. laborer, professional, homemaker, or service) from which to choose. We collapsed the 17 HS&B occupational categories into five larger categories using two parameters: the average educational attainment needed for the occupation and the change in labor market share of each category based on job information from the 1980 and 1990 (1%) census years. Appendix A displays which occupational categories from the survey fit into each category of our constructed variable. The five categories are clerical, subbaccalaureate jobs that decreased in labor market share, subbaccalaureate jobs that increased in labor market share, professional jobs, and expectations to not be working. Though clerical jobs also saw a decrease in labor market share from 1980 to 1990, we kept it separate from the other decreasing jobs category because of how each category is gendered. Professional jobs also saw a net increase in the change in share of labor market. The no work category had no corresponding change in share of labor market.

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<sup>1</sup> N's rounded to nearest 10 per NCES regulations.

*Academic Preparation:* Our models utilize four measures of academic preparation in high school: locus of control, achievement test scores, grade point average (GPA), and advanced course-taking. The locus of control scale refers to a series of questions related to students' perception of how much they feel they can control what happens to them. The answers to these questions were standardized to create a scale with higher values indicating more perceived internal control. Each cohort was also given math, verbal, and reading tests as a part of the survey, the results of which were also combined and standardized. GPA is a continuous measure from 0.5 (mostly Fs) to 4.0 (mostly As) of self-reported grades. Finally, we separated students who had never reported taking any math class higher than Algebra I from students who had.

*Community Labor Market Expectations:* In the 1980 base year survey, almost 60,000 sophomores and seniors from over 1000 schools were surveyed. We took advantage of the larger, per school sample size in the base year to construct a community measure of labor market expectations. This measure is the percent of students surveyed in a school that expected to have a subbaccalaureate jobs that decreased in labor market share (excluding clerical) at age 30.

*Early Adulthood Labor Market Experiences:* Students were asked four years after high school to report on their labor market experiences. Job satisfaction is a standardized scale of questions about how much respondents liked their current or most recent job. Respondents were also asked to recall on a month-to-month basis if they had been unemployed in the last few years. We recorded if a respondent ever reported being unemployed for up to 12 months of non-missing data starting 5 years after expected high school graduation.

*Educational Attainment:* We used each participant's highest self-reported educational attainment from the 1982 to 1992 surveys, supplemented with any degree attainment listed in the postsecondary transcript collection in 1986 and 1992. For our analysis, we reduced the educational attainment categories to high school diploma or less, some college, or Bachelor's degree or more. Those who had an associate's degree were coded in the "some college" category.

*Controls:* We control on parents' educational attainment, race, cohort, high school completion status, and gender (in the combined models).

### **Analytic Plan**

We perform our analyses on two samples, one with men only and another with men and women combined, because the labor market processes that we propose may be related to suicide are highly gendered and may operate differently for men and women. For both sets of models, we analyze the data using multinomial logistic regression, where dying by suicide and dying by other means are compared to surviving until midlife. The results of our analyses are presented in odds ratios. We nest our models, first with background controls, then with occupational expectations, labor market preparation, community labor market expectations, labor market experiences in early adulthood, and educational attainment. We also include an interaction between occupational expectations and community labor market expectations. Our results are weighted by the panel weights and use clustered standard errors at the school-level to account for the sampling design within schools. We use mean/mode imputation with flags for missing data on independent variables. Means/standard deviations and proportions of all variables are listed in Table 1a, by gender in Table 1b.

### **Preliminary Results**

Tables 2 and 3 present odds ratios from multinomial logistic regressions predicting mortality by midlife. Table 2 includes results for men only and Table 3 presents results for men and women combined. The first model depicts patterns of mortality by individual background: men, white individuals, and those who did not complete high school were more likely to die by suicide than other groups. In model 2 of Table 2, men who expected an occupation and declined have more than double the odds of dying by suicide than men who expected professional occupations, although this relationship is only marginally significant. In model 2 in Table 3, none of the occupational expectations significantly predict suicide. After controlling on academic preparation in model 3 in both tables, expecting an occupation that declined is marginally significantly related to suicide. Interestingly, increased test scores protect individuals from other forms of mortality, but actually positively predict suicide (although this relationship is only marginally significant). Additionally, taking above Algebra 1 in high school protects individuals from other death, but is not significantly related to suicide (although the point estimates are positive).

Models 4 and 5 examine the relationship between the community labor market expectations and suicide in midlife. The baseline relationship is not significantly related to suicide in model 4. The interaction in model 5 suggests that individuals who expected an occupation that declined are even more at risk of suicide if they are in a school without other individuals who expected these occupations. Similarly, in model 5 of Table 3, individuals who expected occupations that declined have lower risk of suicide if they are in a high school with other individuals who expected these occupations.

Finally, models 6 and 7 examine the role of labor market and educational experiences in early adulthood. Individuals who were unemployed during early adulthood had higher odds of suicide than those without any unemployment. Educational attainment is protective against suicide and may explain part of the relationship between occupational expectations and suicide.

### **Discussion**

Overall, our results suggest that expecting an occupation in adolescence that declined in labor market share by adulthood predicts suicide by midlife. Given the occupations that declined during this period, this pattern appears to be more pronounced for men. There is some evidence that individuals who were in communities with other individuals who expected these occupations that declined have lower risk of suicide. Perhaps being integrated into a community dealing with similar labor market struggles helps individuals adapt. In addition, labor market preparation in high school, in the form of advanced course-taking, is protective against suicide by midlife. Individuals with more advanced math may have been able to adapt to the changing labor market demands better than those without these advanced learning experiences. Finally, the relationship between occupational expectations and suicide in midlife may be related to later educational attainment because those who expected these blue-collar jobs are less likely to enter higher education.

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Table 1a. Descriptive Statistics (Weighted)

	<i>M (SD)</i>	<i>Missing</i>
Alive	95.45%	0.0%
Died - Other	4.19%	
Died - Suicide	0.37%	
<b>Occupational Expectations</b>		
Individual Expectations		7.4%
Clerical	9.0%	
Subbaccalaureate jobs that declined	17.7%	
Subbaccalaureate jobs that increased	17.9%	
Professional	51.3%	
Not to be working	4.1%	
Community Labor Market Expectations (0 to 100)	17.63 (9.12)	0.0%
<b>Background Controls</b>		
Seniors	44.6%	0.0%
Female	50.7%	0.0%
Race/Ethnicity		0.0%
White†	72.3%	
African American	11.6%	
Hispanic	10.9%	
Other	5.2%	
Parent Education		12.2%
High School or less†	16.3%	
Some college (or vocational)	28.8%	
BA/BS+	24.9%	
Drop out flag	11.6%	0.0%
<b>Academic Preparation</b>		
Locus of Control (-3.03 to 1.4)	0.006 (0.670)	10.1%
GPA (0.5 to 4)	1.66 (0.722)	14.1%
Test Score (27.41 to 72.81)	50.08 (8.910)	13.3%
Took Algebra I or higher	78.0%	6.1%
<b>Early Adulthood Measures</b>		
Job Satisfaction (-2.63 to 1.5)	0.01 (0.690)	21.0%
Unemployment	11.5%	14.5%
Highest Level of education		2.85%
High School or less†	61.8%	
Some Extended Education	17.8%	
Bachelor's Degree or more	20.4%	
<i>N</i>	26,670	

† = Reference Category

Table 1b. Descriptive Statistics by Gender (Weighted)

	Women		Men	
	<i>M (SD)</i>	<i>Missing</i>	<i>M (SD)</i>	<i>Missing</i>
Alive	96.85%	0.0%	94.00%	0%
Died - Other	2.98%		5.43%	
Died - Suicide	0.16%		0.58%	
<b>Occupational Expectations</b>				
Individual Expectations		5.9%		7.9%
Clerical	16.6%		1.0%	
Subbaccalaureate jobs that declined	4.0%		32.3%	
Subbaccalaureate jobs that increased	18.8%		17.0%	
Professional	53.8%		48.6%	
Not to be working	6.8%		1.2%	
Community Labor Market Expectations (0 to 100)	17.13 (9.24)	0.0%	18.15 (8.97)	0%
<b>Background Controls</b>				
Seniors	45.0%	0.0%	44.3%	0.0%
Race/Ethnicity		0.0%		0.0%
White†	72.9%		71.7%	
African American	12.3%		10.9%	
Hispanic	10.2%		11.6%	
Other	4.6%		5.8%	
Parent Education		10.8%		13.6%
High School or less†	46.7%		45.8%	
Some college (or vocational)	29.8%		27.7%	
BA/BS+	23.5%		26.5%	
Drop out flag	10.9%	0.0%	12.2%	0.0%
<b>Academic Preparation</b>				
Locus of Control (-3.03 to 1.4)	0.063 (0.650)	7.8%	-0.057 (0.685)	11.4%
GPA (0.5 to 4)	1.54 (0.693)	12.6%	1.79 (0.729)	14.7%
Test Score (27.41 to 72.81)	49.75 (8.77)	11.9%	50.44 (9.04)	13.7%
Algebra I or higher	79.3%	5.2%	76.6%	6.0%
<b>Early Adulthood Measures</b>				
Job Satisfaction (-2.63 to 1.5)	0.01 (0.702)	20.3%	0.01 (0.685)	20.7%
Unemployment	12.8%	12.1%	10.1%	16.0%
Highest Level of education		1.8%		2.81%
High School or less†	59.0%		64.9%	
Some Extended Education	20.1%		15.4%	
Bachelor's Degree or more	20.9%		19.8%	
<i>N</i>	13,760		12,910	
† = Reference Category				



Table 3. Multinomial Logistic Regression on Mortality and Suicide for Men and Women Reporting Odds Ratios

VARIABLES	1		2		3	
	Died-Other	Died-Suicide	Died-Other	Died-Suicide	Died-Other	Died-Suicide
Male	1.861***	3.582***	1.821***	3.262**	1.817***	3.076**
[ref. female]	(0.169)	(1.150)	(0.187)	(1.244)	(0.187)	(1.170)
Race: African American	1.608***	0.532+	1.594***	0.530+	1.328*	0.636
[ref. white]	(0.168)	(0.196)	(0.168)	(0.199)	(0.153)	(0.259)
Race: Hispanic	1.562***	0.393**	1.540***	0.373**	1.322*	0.461*
	(0.200)	(0.139)	(0.196)	(0.131)	(0.171)	(0.176)
Race: Other	1.128	0.818	1.203	0.935	1.137	0.914
	(0.281)	(0.474)	(0.303)	(0.542)	(0.285)	(0.554)
Senior Cohort	1.473***	0.948	1.513***	1.001	1.554***	1.162
[ref. sophomore]	(0.138)	(0.279)	(0.140)	(0.313)	(0.149)	(0.384)
Parents' Ed: Some College	0.966	1.100	0.966	1.151	1.035	1.088
[ref. High School or below]	(0.106)	(0.391)	(0.107)	(0.412)	(0.116)	(0.399)
Parents' Ed: Bachelor's+	0.834	0.522	0.842	0.593	0.976	0.503
	(0.101)	(0.241)	(0.104)	(0.290)	(0.125)	(0.261)
High School Noncompleter	2.847***	2.443*	2.814***	2.309*	3.767***	3.835
<b>Occupational Expectations</b>	(0.461)	(0.936)	(0.460)	(0.898)	(1.413)	(3.938)
Clerical			1.045	1.492	0.933	1.733
[ref. Professional Increasing]			(0.183)	(1.133)	(0.161)	(1.321)
Declining			1.090	1.721	0.910	2.036+
			(0.138)	(0.669)	(0.120)	(0.851)
Increasing			1.047	1.711	0.968	1.842
			(0.142)	(0.734)	(0.132)	(0.795)
No work			0.848	0.774	0.737	0.870
<b>Academic Preparation</b>			(0.217)	(0.512)	(0.188)	(0.590)
Locus of Control					1.011	1.241
					(0.0815)	(0.383)
Standardized Test Scores					0.980**	1.045+
					(0.00760)	(0.0275)
GPA (Self-Reported)					1.120	1.010
					(0.0872)	(0.294)
Did not take Algebra I					1.246+	1.584
[ref. took Algebra 1 or above]					(0.142)	(0.583)
<b>Community Labor Market Expectations</b>						
Clerical*Community Labor Market Exp						
Declining*Community Labor Market Exp						
Increasing*Community Labor Market Exp						
<b>Early Adulthood Measures</b>						
Job Satisfaction Scale						
Ever unemployed						
[ref. Never unemployed]						
Education Attained: Some college						
[ref. High School]						
Education Attained: Bachelor's+						
Constant	0.0210***	0.00186***	0.0207***	0.00144***	0.0452***	0.000111***
	(0.00251)	(0.000643)	(0.00277)	(0.000655)	(0.0218)	(0.000205)
Observations	26,670	26,670	26,670	26,670	26,670	26,670

Robust seeform in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05, + p&lt;0.1

Models include flags for missing values

Table 3. Multinomial Logistic Regression on Mortality and Suicide for Men and Women Reporting Odds Ratios

VARIABLES	4		5	
	Died-Other	Died-Suicide	Died-Other	Died-Suicide
Male	1.817***	3.251**	1.810***	3.254**
[ref. female]	(0.187)	(1.241)	(0.186)	(1.241)
Race: African American	1.638***	0.559	1.624***	0.534+
[ref. white]	(0.180)	(0.207)	(0.181)	(0.198)
Race: Hispanic	1.553***	0.380**	1.548***	0.369**
	(0.197)	(0.133)	(0.197)	(0.130)
Race: Other	1.214	0.951	1.221	0.986
	(0.306)	(0.542)	(0.307)	(0.557)
Senior Cohort	1.512***	0.999	1.514***	1.020
[ref. sophomore]	(0.140)	(0.312)	(0.140)	(0.320)
Parents' Ed: Some College	0.975	1.170	0.978	1.163
[ref. High School or below]	(0.109)	(0.417)	(0.109)	(0.413)
Parents' Ed: Bachelor's+	0.864	0.621	0.872	0.628
	(0.110)	(0.311)	(0.111)	(0.310)
High School Noncompleter	2.821***	2.315*	2.797***	2.264*
<b>Occupational Expectations</b>	(0.461)	(0.899)	(0.455)	(0.879)
Clerical	1.038	1.471	2.722**	2.631
[ref. Professional Increasing]	(0.182)	(1.118)	(0.854)	(1.980)
Declining	1.064	1.643	1.341	5.529**
	(0.136)	(0.669)	(0.407)	(3.491)
Increasing	1.041	1.692	1.116	3.863*
	(0.141)	(0.732)	(0.334)	(2.396)
No work	0.833	0.749	0.812	0.682
<b>Academic Preparation</b>	(0.213)	(0.498)	(0.209)	(0.453)
Locus of Control				
Standardized Test Scores				
GPA (Self-Reported)				
Did not take Algebra I				
[ref. took Algebra 1 or above]				
<b>Community Labor Market Expectations</b>	1.006	1.010	1.012+	1.037*
	(0.00566)	(0.0122)	(0.00733)	(0.0179)
Clerical*Community Labor Market Exp			0.944***	0.970
			(0.0158)	(0.0320)
Declining*Community Labor Market Exp			0.988	0.942*
			(0.0130)	(0.0245)
Increasing*Community Labor Market Exp			0.996	0.957+
			(0.0141)	(0.0249)
<b>Early Adulthood Measures</b>				
Job Satisfaction Scale				
Ever unemployed				
[ref. Never unemployed]				
Education Attained: Some college				
[ref. High School]				
Education Attained: Bachelor's+				
Constant	0.0185***	0.00118***	0.0166***	0.000721***
	(0.00315)	(0.000560)	(0.00311)	(0.000386)
Observations	26,670	26,670	26,670	26,670

Robust seeform in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05, + p&lt;0.1

Models include flags for missing values

Table 3. Multinomial Logistic Regression on Mortality and Suicide for Men and Women Reporting Odds Ratios

VARIABLES	6		7	
	Died-Other	Died-Suicide	Died-Other	Died-Suicide
Male	1.820***	3.273**	1.800***	3.300**
[ref. female]	(0.186)	(1.243)	(0.186)	(1.234)
Race: African American	1.493***	0.469*	1.487***	0.493+
[ref. white]	(0.160)	(0.177)	(0.158)	(0.187)
Race: Hispanic	1.510**	0.350**	1.442**	0.350**
	(0.192)	(0.125)	(0.185)	(0.124)
Race: Other	1.097	0.755	1.222	0.708
	(0.293)	(0.476)	(0.320)	(0.495)
Senior Cohort	1.498***	0.943	1.441***	0.967
[ref. sophomore]	(0.140)	(0.292)	(0.133)	(0.301)
Parents' Ed: Some College	0.981	1.168	1.005	1.197
[ref. High School or below]	(0.108)	(0.417)	(0.111)	(0.427)
Parents' Ed: Bachelor's+	0.852	0.603	1.003	0.744
	(0.106)	(0.294)	(0.126)	(0.342)
High School Noncompleter	2.661***	2.092+	2.507***	2.035+
	(0.436)	(0.801)	(0.407)	(0.754)
<b>Occupational Expectations</b>				
Clerical	1.060	1.494	0.918	1.252
[ref. Professional Increasing]	(0.186)	(1.134)	(0.160)	(0.951)
Declining	1.096	1.711	0.954	1.424
	(0.139)	(0.659)	(0.121)	(0.569)
Increasing	1.056	1.745	0.967	1.524
	(0.143)	(0.741)	(0.131)	(0.647)
No work	0.842	0.724	0.732	0.665
<b>Academic Preparation</b>	(0.215)	(0.483)	(0.189)	(0.441)
Locus of Control				
Standardized Test Scores				
GPA (Self-Reported)				
Did not take Algebra I				
[ref. took Algebra 1 or above]				
<b>Community Labor Market Expectations</b>				
Clerical*Community Labor Market Exp				
Declining*Community Labor Market Exp				
Increasing*Community Labor Market Exp				
<b>Early Adulthood Measures</b>				
Job Satisfaction Scale	0.761***	1.011		
	(0.0506)	(0.190)		
Ever unemployed	1.274+	2.319*		
[ref. Never unemployed]	(0.172)	(0.970)		
Education Attained: Some college			0.767*	1.192
[ref. High School]			(0.0901)	(0.403)
Education Attained: Bachelor's+			0.383***	0.277*
			(0.0628)	(0.174)
Constant	0.0190***	0.00118***	0.0267***	0.00172***
	(0.00251)	(0.000565)	(0.00371)	(0.000777)
Observations	26,670	26,670	26,670	26,670

Robust seeform in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1

Models include flags for missing values

Table 2. Multinomial Logistic Regression on Mortality and Suicide for Men Only Reporting Odds Ratios

VARIABLES	1		2		3	
	Died-Other	Died-Suicide	Died-Other	Died-Suicide	Died-Other	Died-Suicide
Race: African American [ref. white]	1.546** (0.220)	0.539 (0.245)	1.522** (0.219)	0.538 (0.254)	1.289 (0.199)	0.670 (0.330)
Race: Hispanic	1.513** (0.224)	0.506+ (0.188)	1.475** (0.214)	0.472* (0.175)	1.294+ (0.190)	0.602 (0.245)
Race: Other	1.296 (0.394)	0.885 (0.559)	1.437 (0.444)	0.974 (0.627)	1.308 (0.399)	0.944 (0.639)
Senior Cohort [ref. sophomore]	1.422** (0.167)	0.801 (0.263)	1.468*** (0.170)	0.826 (0.287)	1.586*** (0.190)	0.922 (0.353)
Parents' Ed: Some College [ref. High School or below]	1.084 (0.151)	1.045 (0.433)	1.104 (0.155)	1.146 (0.460)	1.182 (0.169)	1.093 (0.443)
Parents' Ed: Bachelor's+	0.842 (0.131)	0.563 (0.283)	0.874 (0.140)	0.687 (0.361)	1.024 (0.171)	0.595 (0.334)
High School Noncompleter	2.641*** (0.548)	1.498 (0.803)	2.543*** (0.532)	1.344 (0.755)	2.297+ (1.004)	1.973 (1.983)
<b>Occupational Expectations</b>						
Clerical [ref. Professional Increasing]			1.500 (0.576)	5.006 (5.269)	1.290 (0.516)	6.056+ (6.346)
Declining			1.153 (0.159)	2.065+ (0.862)	0.937 (0.137)	2.365+ (1.076)
Increasing			0.964 (0.170)	1.598 (0.814)	0.900 (0.160)	1.674 (0.874)
No work			1.606 (0.674)	5.73e-08*** (2.08e-08)	1.333 (0.559)	1.93e-08*** (8.14e-09)
<b>Academic Preparation</b>						
Locus of Control					0.999 (0.100)	1.194 (0.444)
Standardized Test Scores					0.983+ (0.00979)	1.060+ (0.0337)
GPA (Self-Reported)					1.101 (0.104)	1.252 (0.375)
Did not take Algebra I [ref. took Algebra 1 or above]					1.477** (0.220)	1.733 (0.705)
<b>Community Labor Market Expectations</b>						
Clerical*Community Labor Market Exp						
Declining*Community Labor Market Exp						
Increasing*Community Labor Market Exp						
<b>Early Adulthood Measures</b>						
Job Satisfaction Scale						
Ever unemployed [ref. Never unemployed]						
Education Attained: Some college [ref. High School]						
Education Attained: Bachelor's+						
Constant	0.0389*** (0.00495)	0.00720*** (0.00193)	0.0365*** (0.00543)	0.00463*** (0.00156)	0.0671*** (0.0417)	0.000108*** (0.000219)
Observations	12,910	12,910	12,910	12,910	12,910	12,910

Robust seeform in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1

Models include flags for missing values

Models include flags for missing values

Table 2. Multinomial Logistic Regression on Mortality and Suicide for Men Only Reporting Odds Ratios

VARIABLES	4		5	
	Died-Other	Died-Suicide	Died-Other	Died-Suicide
Race: African American [ref. white]	1.610** (0.243)	0.541 (0.252)	1.600** (0.243)	0.529 (0.244)
Race: Hispanic	1.502** (0.217)	0.473* (0.175)	1.497** (0.215)	0.465* (0.173)
Race: Other	1.468 (0.452)	0.977 (0.613)	1.475 (0.454)	1.017 (0.627)
Senior Cohort [ref. sophomore]	1.464*** (0.169)	0.826 (0.287)	1.470*** (0.170)	0.843 (0.295)
Parents' Ed: Some College [ref. High School or below]	1.122 (0.158)	1.148 (0.461)	1.121 (0.157)	1.142 (0.460)
Parents' Ed: Bachelor's+	0.921 (0.150)	0.691 (0.380)	0.922 (0.150)	0.699 (0.381)
High School Noncompleter	2.575*** (0.535)	1.345 (0.755)	2.530*** (0.524)	1.320 (0.741)
<b>Occupational Expectations</b>				
Clerical [ref. Professional Increasing]	1.492 (0.572)	4.995 (5.258)	2.287 (1.602)	3.686 (4.311)
Declining	1.095 (0.154)	2.052+ (0.896)	1.510 (0.488)	5.158* (3.618)
Increasing	0.954 (0.168)	1.596 (0.817)	0.693 (0.248)	2.587 (2.132)
No work	1.562 (0.659)	1.63e-08*** (6.06e-09)	1.553 (0.656)	1.58e-08*** (5.85e-09)
<b>Academic Preparation</b>				
Locus of Control				
Standardized Test Scores				
GPA (Self-Reported)				
Did not take Algebra I [ref. took Algebra 1 or above]				
<b>Community Labor Market Expectations</b>	1.012 (0.00747)	1.001 (0.0148)	1.015 (0.0104)	1.023 (0.0233)
Clerical*Community Labor Market Exp			0.975 (0.0315)	1.012 (0.0300)
Declining*Community Labor Market Exp			0.985 (0.0142)	0.954 (0.0285)
Increasing*Community Labor Market Exp			1.017 (0.0171)	0.973 (0.0365)
<b>Early Adulthood Measures</b>				
Job Satisfaction Scale				
Ever unemployed [ref. Never unemployed]				
Education Attained: Some college [ref. High School]				
Education Attained: Bachelor's+				
Constant	0.0291*** (0.00606)	0.00451*** (0.00184)	0.0276*** (0.00689)	0.00308*** (0.00170)
Observations	12,910	12,910	12,910	12,910

Robust seeform in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1

Models include flags for missing values

Table 2. Multinomial Logistic Regression on Mortality and Suicide for Men Only Reporting Odds Ratios

VARIABLES	6		7	
	Died-Other	Died-Suicide	Died-Other	Died-Suicide
Race: African American [ref. white]	1.452* (0.214)	0.462 (0.219)	1.401* (0.204)	0.489 (0.233)
Race: Hispanic	1.468** (0.212)	0.442* (0.169)	1.373* (0.200)	0.435* (0.165)
Race: Other	1.422 (0.455)	0.761 (0.541)	1.492 (0.473)	0.665 (0.539)
Senior Cohort [ref. sophomore]	1.438** (0.167)	0.766 (0.256)	1.392** (0.162)	0.807 (0.279)
Parents' Ed: Some College [ref. High School or below]	1.121 (0.157)	1.168 (0.468)	1.139 (0.160)	1.186 (0.473)
Parents' Ed: Bachelor's+	0.890 (0.143)	0.711 (0.374)	1.038 (0.168)	0.834 (0.409)
High School Noncompleter	2.446***	1.209	2.253***	1.167
<b>Occupational Expectations</b>	(0.510)	(0.654)	(0.469)	(0.624)
Clerical [ref. Professional Increasing]	1.548 (0.585)	4.604 (4.957)	1.336 (0.509)	4.507 (4.711)
Declining	1.163 (0.161)	2.053+ (0.845)	0.984 (0.137)	1.709 (0.742)
Increasing	0.971 (0.170)	1.647 (0.825)	0.885 (0.156)	1.469 (0.742)
No work	1.579	1.65e-08***	1.382	1.13e-08***
<b>Academic Preparation</b>	(0.674)	(6.42e-09)	(0.584)	(4.18e-09)
Locus of Control				
Standardized Test Scores				
GPA (Self-Reported)				
Did not take Algebra I [ref. took Algebra 1 or above]				
<b>Community Labor Market Expectations</b>				
Clerical*Community Labor Market Exp				
Declining*Community Labor Market Exp				
Increasing*Community Labor Market Exp				
<b>Early Adulthood Measures</b>				
Job Satisfaction Scale	0.788** (0.0698)	0.865 (0.194)		
Ever unemployed [ref. Never unemployed]	1.453* (0.257)	2.777* (1.375)		
Education Attained: Some college [ref. High School]			0.774 (0.124)	0.711 (0.321)
Education Attained: Bachelor's+			0.328*** (0.0739)	0.317+ (0.217)
Constant	0.0342*** (0.00518)	0.00356*** (0.00123)	0.0482*** (0.00764)	0.00606*** (0.00236)
Observations	12,910	12,910	12,910	12,910

Robust seeform in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1

Models include flags for missing values

Appendix A. Definition of Occupational Expectations Categories for Analysis

Analytic Occupational Expectations Categories	HS&B Occupational Expectations Categories	% Change in Labor Market Share from 1980-1990 (Census)
Subbaccalaureate - Clerical	Clerical	-6.1%
Subbaccalaureate - Declining Share of Labor Market	Craftsman	-4.6%
	Farmer, Farm manager	-11.8%
	Laborer	-6.1%
	Military	-15.4%
Subbaccalaureate - Increasing Share of Labor Market	Operative	-16.0%
	Protective	+11.6%
	Service	+.4%
	Technical	+20.3%
Baccalaureate - Professional	Sales	+6.8%
	Manager, admin	+9.9%
	Professional 1	+13.0%
	Professional 2	+10.8%
	School Teacher	+5.3%
Not Working	Proprietor	N/A
	Homemaker	N/A
	No work	N/A