#### Causal Claims Tables

#### **Summary Statistics**

Table 1: Summary Statistics for NLSY Variables Physical Health scale ranges from 10 to 70. Depression measure from CES-D, ranging from 0 to 24; Neuroticism and Conscientiousness derived from TIPI, ranging from 1 to 7; Education represents highest grade completed, ranging from 0 (none) to 20 (eight years of college or more); Income represents total net family income in 2014 dollars

Variable	Mean	Standard Deviation	Minimu	m 25th Percentile	50th Percentile	75th Percentile		Number of Observations
Physical Health <sup>i</sup>	51.99	8.08	11.22	51.26	54.84	56.51	68.37	8,402
Physical Health <sup>ii</sup>	49.09	10.29	11.22	46.67	53.55	55.50	67.31	7,804
Depression <sup>ii</sup>	3.88	4.51	0.00	0.00	2.00	6.00	21.00	7,813
Neuroticism	2.90	1.39	1.00	2.00	3.00	4.00	7.00	6,969
Conscientious	sne <b>s</b> s73	1.32	1.00	5.00	6.00	7.00	7.00	6,966
Education <sup>ii</sup>	13.33	2.57	0.00	12.00	12.00	15.00	20.00	7,693
$Income^{ii}$	68,487.81	85,978.38	-3.26	11,342.18	47,000.00	94,861.85	595,986.00	7,693

<sup>&</sup>lt;sup>i</sup>As measured at age 40

# Illustration 1: Does conscientiousness causally influence physical health?

OLS: Does Conscientiousness Causally Influence Physical Health (At Age 50)?

Characteristic	Beta	T-Statistic	95% CI	P-Value
conscientiousness	0.06	2.93	0.02,0.09	0.003
race	0.23	5.59	0.15,  0.31	< 0.001
sex	0.16	3.95	0.08,  0.24	< 0.001

 $<sup>^{\</sup>rm ii}{\rm As}$  measured at age 50

### Discordant: Does Conscientiousness Causally Influence Physical Health (At Age 50)?

Characteristic	Beta	T-Statistic	95% CI	P-Value
age_50_physical_health_mean	-0.85	-39.3	-0.90, -0.81	< 0.001
conscientiousness_diff	0.01	1.26	-0.01, 0.04	0.2
conscientiousness_mean	0.05	2.45	0.01,  0.09	0.014
$sex_1$	0.02	0.504	-0.05, 0.08	0.6
race_1	-0.05	-1.49	-0.11, 0.02	0.14
$sex_2$	-0.07	-2.09	-0.13, 0.00	0.037

## Illustration 2: Does conscientiousness causally influence mental health?

#### OLS: Does Conscientiousness Causally Influence Mental Health (Depression)?

Characteristic	Beta	T-Statistic	95% CI	P-Value
conscientiousness	-0.15	-7.26	-0.19, -0.11	< 0.001
race	-0.12	-2.93	-0.21, -0.04	0.003
sex	-0.25	-6.00	-0.33, -0.17	< 0.001

### OLS: Does Conscientiousness Causally Influence Mental Health (Depression) with Income and Highest Grade Level (At Age 50) as Covariates?

Beta	T-Statistic	95% CI	P-Value
-0.13	-4.72	-0.18, -0.07	< 0.001
-0.09	-1.65	-0.20, 0.02	0.10
-0.02	-1.79	-0.05, 0.00	0.073
-0.17	-3.24	-0.28, -0.07	0.001
0.00	-3.45	0.00,  0.00	< 0.001
	-0.13 -0.09 -0.02 -0.17	-0.13 -4.72 -0.09 -1.65 -0.02 -1.79 -0.17 -3.24	-0.13 -4.72 -0.18, -0.07 -0.09 -1.65 -0.20, 0.02 -0.02 -1.79 -0.05, 0.00 -0.17 -3.24 -0.28, -0.07

### Discordant: Does Conscientiousness Causally Influence Mental Health (Depression)?

Characteristic	Beta	T-Statistic	95% CI	P-Value
depression mean	0.83	40.1	0.79, 0.87	< 0.001

Characteristic	Beta	T-Statistic	95% CI	P-Value
conscientiousness_diff	-0.02	-2.16	-0.05, 0.00	0.031
conscientiousness_mean	0.04	2.05	0.00,  0.08	0.041
sex_1	-0.04	-1.33	-0.10, 0.02	0.2
race_1	-0.09	-3.12	-0.15, -0.03	0.002
$sex_2$	0.07	2.23	0.01,0.13	0.026

Discordant: Does Conscientiousness Causally Influence Mental Health (Depression) with Income and Highest Grade Level (At Age 50) as Covariates?

Characteristic	Beta	T-Statistic	95% CI	P-Value
depression_mean	0.82	22.0	0.75,0.89	< 0.001
$conscientiousness\_diff$	-0.02	-1.06	-0.06, 0.02	0.3
$highest\_grade\_at\_age\_50\_diff$	0.00	0.432	-0.02, 0.02	0.7
$tnfi\_at\_age\_50\_diff$	0.00	-0.179	0.00,  0.00	0.9
conscientiousness_mean	0.00	0.055	-0.07, 0.07	>0.9
highest_grade_at_age_50_mean	0.00	0.100	-0.02, 0.03	>0.9
tnfi_at_age_50_mean	0.00	0.648	0.00,  0.00	0.5
sex_1	-0.10	-2.06	-0.20, 0.00	0.040
race_1	-0.06	-1.19	-0.16, 0.04	0.2
sex_2	0.04	0.870	-0.05, 0.14	0.4

# Illustration 3 Does neuroticism causally influence mental health? OLS: Does Neuroticism Causally Influence Mental Health (Depression)?

Characteristic	Beta	T-Statistic	95% CI	P-Value
neuroticism	0.19	8.86	0.14,0.23	< 0.001
race	-0.14	-3.24	-0.22, -0.05	0.001
sex	-0.23	-5.41	-0.31, -0.14	< 0.001

OLS: Does Neuroticism Causally Influence Mental Health (Depression) with Income and Highest Grade Level (At Age 50) as Covariates?

Characteristic	Beta	T-Statistic	95% CI	P-Value
neuroticism	0.15	5.63	0.10,  0.21	< 0.001
race	-0.11	-2.05	-0.22, 0.00	0.041
highest_grade_at_age_50	-0.02	-1.57	-0.04, 0.00	0.12
sex	-0.15	-2.83	-0.26, -0.05	0.005
$tnfi\_at\_age\_50$	0.00	-3.88	0.00,  0.00	< 0.001

#### Discordant: Does Neuroticism Causally Influence Mental Health (Depression)?

Characteristic	Beta	T-Statistic	95% CI	P-Value
depression_mean	0.83	39.1	0.79, 0.87	< 0.001
$neuroticism\_diff$	0.05	4.45	0.03,0.07	< 0.001
neuroticism_mean	-0.03	-1.41	-0.07, 0.01	0.2
sex_1	-0.03	-0.941	-0.09, 0.03	0.3
race_1	-0.09	-3.08	-0.15, -0.03	0.002
$sex_2$	0.06	1.88	0.00,  0.11	0.060

### Discordant: Does Neuroticism Causally Influence Mental Health (Depression) with Income and Highest Grade Level (At Age 50) as Covariates?

Characteristic	Beta	T-Statistic	95% CI	P-Value
depression_mean	0.81	21.9	0.74,  0.88	< 0.001
$neuroticism\_diff$	0.06	3.40	0.03,  0.10	< 0.001
$highest\_grade\_at\_age\_50\_diff$	0.00	-0.361	-0.02, 0.02	0.7
$tnfi\_at\_age\_50\_diff$	0.00	-0.698	0.00,  0.00	0.5
neuroticism_mean	-0.01	-0.230	-0.08, 0.06	0.8
$highest\_grade\_at\_age\_50\_mean$	0.00	0.265	-0.02, 0.03	0.8
$tnfi\_at\_age\_50\_mean$	0.00	0.706	0.00,  0.00	0.5
sex_1	-0.12	-2.53	-0.22, -0.03	0.012
race_1	-0.06	-1.25	-0.16, 0.04	0.2
sex_2	0.07	1.35	-0.03, 0.16	0.2