Causal Claims Tables

# Summary Statistics

\*\*Summary Statistics for NLSY Variables\*\*
Physical Health scale ranges from 0 to 100.
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** | **Minimum** | **25th Percentile** | **50th Percentile** | **75th Percentile** | **Maximum** | **Number of Observations** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Physical Health | 49.09 | 10.29 | 11.22 | 46.67 | 53.55 | 55.50 | 67.31 | 7,804 |
| Depression | 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 |
| Conscientiousness | 5.73 | 1.32 | 1.00 | 5.00 | 6.00 | 7.00 | 7.00 | 6,966 |
| Education | 13.33 | 2.57 | 0.00 | 12.00 | 12.00 | 15.00 | 20.00 | 7,693 |
| Income | 68,487.81 | 85,978.38 | -3.26 | 11,342.18 | 47,000.00 | 94,861.85 | 595,986.00 | 7,693 |

# Illustration 1: Does conscientiousness causally influence physical health?

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | -0.204 | -0.278, -0.130 | -5.41 | <0.001 |
| conscientiousness | 0.065 | 0.022, 0.109 | 2.93 | 0.003 |
| race | 0.249 | 0.162, 0.336 | 5.59 | <0.001 |
| sex | 0.176 | 0.089, 0.263 | 3.95 | <0.001 |
| 1CI = Confidence Interval | | | | |
| R² = 0.027; F-statistic = 18.5; DF1 = 3; DF2 = 1,963; p-value = <0.001; No. Obs. = 1,967 | | | | |

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.049 | -0.015, 0.114 | 1.50 | 0.133 |
| age\_50\_physical\_health\_mean | -0.670 | -0.703, -0.636 | -39.3 | <0.001 |
| conscientiousness\_diff | 0.020 | -0.013, 0.053 | 1.18 | 0.237 |
| conscientiousness\_mean | 0.042 | 0.008, 0.075 | 2.46 | 0.014 |
| sex\_1 | 0.017 | -0.049, 0.083 | 0.513 | 0.608 |
| race\_1 | -0.051 | -0.117, 0.015 | -1.50 | 0.133 |
| sex\_2 | -0.071 | -0.136, -0.005 | -2.10 | 0.036 |
| 1CI = Confidence Interval | | | | |
| R² = 0.454; F-statistic = 271; DF1 = 6; DF2 = 1,960; p-value = <0.001; No. Obs. = 1,967 | | | | |

# Illustration 2: Does conscientiousness causally influence mental health?

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.188 | 0.116, 0.260 | 5.12 | <0.001 |
| conscientiousness | -0.157 | -0.199, -0.115 | -7.26 | <0.001 |
| race | -0.127 | -0.212, -0.042 | -2.93 | 0.003 |
| sex | -0.259 | -0.344, -0.174 | -6.00 | <0.001 |
| 1CI = Confidence Interval | | | | |
| R² = 0.045; F-statistic = 32.2; DF1 = 3; DF2 = 2,046; p-value = <0.001; No. Obs. = 2,050 | | | | |

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.149 | 0.050, 0.249 | 2.94 | 0.003 |
| conscientiousness | -0.138 | -0.195, -0.081 | -4.72 | <0.001 |
| race | -0.101 | -0.221, 0.019 | -1.65 | 0.098 |
| highest\_grade\_at\_age\_50 | -0.059 | -0.124, 0.006 | -1.79 | 0.073 |
| sex | -0.191 | -0.307, -0.075 | -3.24 | 0.001 |
| tnfi\_at\_age\_50 | -0.116 | -0.182, -0.050 | -3.45 | <0.001 |
| 1CI = Confidence Interval | | | | |
| R² = 0.068; F-statistic = 16.4; DF1 = 5; DF2 = 1,117; p-value = <0.001; No. Obs. = 1,123 | | | | |

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.030 | -0.033, 0.093 | 0.922 | 0.357 |
| depression\_mean | 0.675 | 0.642, 0.708 | 40.1 | <0.001 |
| conscientiousness\_diff | -0.033 | -0.065, -0.001 | -2.03 | 0.043 |
| conscientiousness\_mean | 0.034 | 0.001, 0.067 | 2.04 | 0.041 |
| sex\_1 | -0.050 | -0.114, 0.015 | -1.52 | 0.129 |
| race\_1 | -0.103 | -0.167, -0.039 | -3.16 | 0.002 |
| sex\_2 | 0.079 | 0.014, 0.143 | 2.40 | 0.016 |
| 1CI = Confidence Interval | | | | |
| R² = 0.461; F-statistic = 291; DF1 = 6; DF2 = 2,043; p-value = <0.001; No. Obs. = 2,050 | | | | |

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.070 | -0.045, 0.185 | 1.19 | 0.234 |
| depression\_mean | 0.670 | 0.610, 0.730 | 21.9 | <0.001 |
| conscientiousness\_diff | -0.040 | -0.097, 0.018 | -1.36 | 0.175 |
| highest\_grade\_at\_age\_50\_diff | 0.015 | -0.043, 0.073 | 0.503 | 0.615 |
| tnfi\_at\_age\_50\_diff | 0.010 | -0.049, 0.069 | 0.330 | 0.742 |
| conscientiousness\_mean | 0.003 | -0.055, 0.061 | 0.097 | 0.923 |
| highest\_grade\_at\_age\_50\_mean | 0.001 | -0.065, 0.068 | 0.037 | 0.971 |
| tnfi\_at\_age\_50\_mean | 0.025 | -0.045, 0.094 | 0.700 | 0.484 |
| sex\_1 | -0.118 | -0.233, -0.002 | -2.00 | 0.046 |
| race\_1 | -0.071 | -0.192, 0.051 | -1.14 | 0.253 |
| sex\_2 | 0.046 | -0.070, 0.162 | 0.781 | 0.435 |
| 1CI = Confidence Interval | | | | |
| R² = 0.460; F-statistic = 56.7; DF1 = 10; DF2 = 665; p-value = <0.001; No. Obs. = 676 | | | | |

# Illustration 3: Does neuroticism causally influence mental health?

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.181 | 0.110, 0.253 | 4.96 | <0.001 |
| neuroticism | 0.191 | 0.148, 0.233 | 8.86 | <0.001 |
| race | -0.140 | -0.224, -0.055 | -3.24 | 0.001 |
| sex | -0.233 | -0.317, -0.148 | -5.41 | <0.001 |
| 1CI = Confidence Interval | | | | |
| R² = 0.056; F-statistic = 40.7; DF1 = 3; DF2 = 2,042; p-value = <0.001; No. Obs. = 2,046 | | | | |

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.149 | 0.050, 0.248 | 2.94 | 0.003 |
| neuroticism | 0.163 | 0.106, 0.220 | 5.63 | <0.001 |
| race | -0.125 | -0.244, -0.005 | -2.05 | 0.041 |
| highest\_grade\_at\_age\_50 | -0.052 | -0.116, 0.013 | -1.57 | 0.116 |
| sex | -0.166 | -0.281, -0.051 | -2.83 | 0.005 |
| tnfi\_at\_age\_50 | -0.129 | -0.195, -0.064 | -3.88 | <0.001 |
| 1CI = Confidence Interval | | | | |
| R² = 0.078; F-statistic = 18.8; DF1 = 5; DF2 = 1,119; p-value = <0.001; No. Obs. = 1,125 | | | | |

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.029 | -0.034, 0.092 | 0.894 | 0.372 |
| depression\_mean | 0.671 | 0.637, 0.705 | 39.1 | <0.001 |
| neuroticism\_diff | 0.067 | 0.035, 0.099 | 4.12 | <0.001 |
| neuroticism\_mean | -0.022 | -0.055, 0.011 | -1.29 | 0.198 |
| sex\_1 | -0.034 | -0.099, 0.030 | -1.04 | 0.296 |
| race\_1 | -0.101 | -0.165, -0.037 | -3.10 | 0.002 |
| sex\_2 | 0.064 | 0.000, 0.129 | 1.96 | 0.050 |
| 1CI = Confidence Interval | | | | |
| R² = 0.463; F-statistic = 292; DF1 = 6; DF2 = 2,039; p-value = <0.001; No. Obs. = 2,046 | | | | |

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

| **Characteristic** | **Standardized β** | **95% CI**1 | **t-statistic** | **p-value** |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.072 | -0.042, 0.186 | 1.25 | 0.213 |
| depression\_mean | 0.658 | 0.599, 0.718 | 21.7 | <0.001 |
| neuroticism\_diff | 0.109 | 0.053, 0.165 | 3.84 | <0.001 |
| highest\_grade\_at\_age\_50\_diff | 0.007 | -0.051, 0.064 | 0.229 | 0.819 |
| tnfi\_at\_age\_50\_diff | -0.013 | -0.070, 0.044 | -0.445 | 0.656 |
| neuroticism\_mean | -0.001 | -0.059, 0.057 | -0.038 | 0.970 |
| highest\_grade\_at\_age\_50\_mean | 0.009 | -0.057, 0.074 | 0.262 | 0.793 |
| tnfi\_at\_age\_50\_mean | 0.023 | -0.046, 0.091 | 0.648 | 0.517 |
| sex\_1 | -0.128 | -0.242, -0.014 | -2.20 | 0.028 |
| race\_1 | -0.080 | -0.200, 0.040 | -1.31 | 0.190 |
| sex\_2 | 0.067 | -0.046, 0.181 | 1.17 | 0.244 |
| 1CI = Confidence Interval | | | | |
| R² = 0.473; F-statistic = 59.8; DF1 = 10; DF2 = 666; p-value = <0.001; No. Obs. = 677 | | | | |