Causal Claims Tables

# Summary Statistics

Table :**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** | **Minimum** | **25th Percentile** | **50th Percentile** | **75th Percentile** | **Maximum** | **Number of Observations** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Physical Healthi | 51.99 | 8.08 | 11.22 | 51.26 | 54.84 | 56.51 | 68.37 | 8,402 |
| Physical Healthii | 49.09 | 10.29 | 11.22 | 46.67 | 53.55 | 55.50 | 67.31 | 7,804 |
| Depressionii | 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 |
| Educationii | 13.33 | 2.57 | 0.00 | 12.00 | 12.00 | 15.00 | 20.00 | 7,693 |
| Incomeii | 68,487.81 | 85,978.38 | -3.26 | 11,342.18 | 47,000.00 | 94,861.85 | 595,986.00 | 7,693 |
| iAs measured at age 40 | | | | | | | | |
| iiAs measured at age 50 | | | | | | | | |

# Illustration 1: Does conscientiousness causally influence physical health?

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

| Characteristic | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | -0.128 | -3.72 | -0.196, -0.061 | <0.001 |
| conscientiousness | 0.057 | 2.93 | 0.019, 0.095 | 0.003 |
| race | 0.228 | 5.59 | 0.148, 0.308 | <0.001 |
| sex | 0.161 | 3.95 | 0.081, 0.241 | <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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.921 | 29.9 | 0.860, 0.98 | <0.001 |
| age\_50\_physical\_health\_mean | -0.853 | -39.3 | -0.895, -0.810 | <0.001 |
| conscientiousness\_diff | 0.014 | 1.26 | -0.008, 0.037 | 0.209 |
| conscientiousness\_mean | 0.052 | 2.45 | 0.010, 0.094 | 0.014 |
| sex\_1 | 0.016 | 0.504 | -0.046, 0.077 | 0.615 |
| race\_1 | -0.047 | -1.49 | -0.109, 0.015 | 0.138 |
| sex\_2 | -0.065 | -2.09 | -0.127, -0.004 | 0.037 |
| 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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.137 | 3.84 | 0.067, 0.207 | <0.001 |
| conscientiousness | -0.146 | -7.26 | -0.186, -0.107 | <0.001 |
| race | -0.123 | -2.93 | -0.205, -0.041 | 0.003 |
| sex | -0.251 | -6.00 | -0.333, -0.169 | <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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.411 | 2.53 | 0.093, 0.729 | 0.011 |
| conscientiousness | -0.128 | -4.72 | -0.181, -0.075 | <0.001 |
| race | -0.092 | -1.65 | -0.200, 0.017 | 0.098 |
| highest\_grade\_at\_age\_50 | -0.022 | -1.79 | -0.046, 0.002 | 0.073 |
| sex | -0.173 | -3.24 | -0.278, -0.068 | 0.001 |
| tnfi\_at\_age\_50 | 0.000 | -3.45 | 0.000, 0.000 | <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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.95 | 32.5 | 0.895, 1.01 | <0.001 |
| depression\_mean | 0.833 | 40.1 | 0.792, 0.873 | <0.001 |
| conscientiousness\_diff | -0.024 | -2.16 | -0.045, -0.002 | 0.031 |
| conscientiousness\_mean | 0.042 | 2.05 | 0.002, 0.083 | 0.041 |
| sex\_1 | -0.040 | -1.33 | -0.099, 0.019 | 0.185 |
| race\_1 | -0.093 | -3.12 | -0.152, -0.035 | 0.002 |
| sex\_2 | 0.067 | 2.23 | 0.008, 0.125 | 0.026 |
| 1CI = Confidence Interval | | | | |
| R² = 0.460; F-statistic = 290; 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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.922 | 5.43 | 0.589, 1.26 | <0.001 |
| depression\_mean | 0.820 | 22.0 | 0.747, 0.893 | <0.001 |
| conscientiousness\_diff | -0.021 | -1.06 | -0.061, 0.018 | 0.289 |
| highest\_grade\_at\_age\_50\_diff | 0.004 | 0.432 | -0.015, 0.024 | 0.666 |
| tnfi\_at\_age\_50\_diff | 0.000 | -0.179 | 0.000, 0.000 | 0.858 |
| conscientiousness\_mean | 0.002 | 0.055 | -0.069, 0.073 | 0.956 |
| highest\_grade\_at\_age\_50\_mean | 0.001 | 0.100 | -0.024, 0.026 | 0.920 |
| tnfi\_at\_age\_50\_mean | 0.000 | 0.648 | 0.000, 0.000 | 0.517 |
| sex\_1 | -0.101 | -2.06 | -0.197, -0.005 | 0.040 |
| race\_1 | -0.061 | -1.19 | -0.163, 0.040 | 0.235 |
| sex\_2 | 0.043 | 0.870 | -0.054, 0.139 | 0.384 |
| 1CI = Confidence Interval | | | | |
| R² = 0.460; F-statistic = 56.6; 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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.137 | 3.86 | 0.068, 0.207 | <0.001 |
| neuroticism | 0.185 | 8.86 | 0.144, 0.226 | <0.001 |
| race | -0.136 | -3.24 | -0.217, -0.054 | 0.001 |
| sex | -0.226 | -5.41 | -0.308, -0.144 | <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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.398 | 2.43 | 0.077, 0.718 | 0.015 |
| neuroticism | 0.154 | 5.63 | 0.100, 0.207 | <0.001 |
| race | -0.114 | -2.05 | -0.222, -0.005 | 0.041 |
| highest\_grade\_at\_age\_50 | -0.019 | -1.57 | -0.043, 0.005 | 0.116 |
| sex | -0.151 | -2.83 | -0.256, -0.046 | 0.005 |
| tnfi\_at\_age\_50 | 0.000 | -3.88 | 0.000, 0.000 | <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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.942 | 31.9 | 0.884, 1.00 | <0.001 |
| depression\_mean | 0.827 | 39.1 | 0.786, 0.869 | <0.001 |
| neuroticism\_diff | 0.050 | 4.45 | 0.028, 0.072 | <0.001 |
| neuroticism\_mean | -0.029 | -1.41 | -0.071, 0.012 | 0.160 |
| sex\_1 | -0.028 | -0.941 | -0.087, 0.031 | 0.347 |
| race\_1 | -0.092 | -3.08 | -0.150, -0.033 | 0.002 |
| sex\_2 | 0.056 | 1.88 | -0.002, 0.115 | 0.060 |
| 1CI = Confidence Interval | | | | |
| R² = 0.463; F-statistic = 293; 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 | Beta | t-statistic | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| (Intercept) | 0.880 | 5.18 | 0.546, 1.21 | <0.001 |
| depression\_mean | 0.809 | 21.9 | 0.737, 0.882 | <0.001 |
| neuroticism\_diff | 0.065 | 3.40 | 0.027, 0.102 | <0.001 |
| highest\_grade\_at\_age\_50\_diff | -0.004 | -0.361 | -0.023, 0.016 | 0.718 |
| tnfi\_at\_age\_50\_diff | 0.000 | -0.698 | 0.000, 0.000 | 0.485 |
| neuroticism\_mean | -0.008 | -0.230 | -0.077, 0.061 | 0.818 |
| highest\_grade\_at\_age\_50\_mean | 0.003 | 0.265 | -0.022, 0.028 | 0.791 |
| tnfi\_at\_age\_50\_mean | 0.000 | 0.706 | 0.000, 0.000 | 0.481 |
| sex\_1 | -0.122 | -2.53 | -0.217, -0.027 | 0.012 |
| race\_1 | -0.064 | -1.25 | -0.164, 0.036 | 0.212 |
| sex\_2 | 0.065 | 1.35 | -0.030, 0.161 | 0.178 |
| 1CI = Confidence Interval | | | | |
| R² = 0.472; F-statistic = 59.5; DF1 = 10; DF2 = 666; p-value = <0.001; No. Obs. = 677 | | | | |