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) | -0.13 | -3.72 | -0.20, -0.06 | <0.001 |
| 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 |
| 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) | 0.92 | 29.9 | 0.86, 1.0 | <0.001 |
| 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 |
| 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) | 0.14 | 3.84 | 0.07, 0.21 | <0.001 |
| 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 |
| 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) | 0.41 | 2.53 | 0.09, 0.73 | 0.011 |
| conscientiousness | -0.13 | -4.72 | -0.18, -0.07 | <0.001 |
| race | -0.09 | -1.65 | -0.20, 0.02 | 0.10 |
| highest\_grade\_at\_age\_50 | -0.02 | -1.79 | -0.05, 0.00 | 0.073 |
| sex | -0.17 | -3.24 | -0.28, -0.07 | 0.001 |
| tnfi\_at\_age\_50 | 0.00 | -3.45 | 0.00, 0.00 | <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) | 1.0 | 32.5 | 0.90, 1.0 | <0.001 |
| depression\_mean | 0.83 | 40.1 | 0.79, 0.87 | <0.001 |
| 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 |
| 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) | 0.92 | 5.43 | 0.59, 1.3 | <0.001 |
| 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 |
| 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) | 0.14 | 3.86 | 0.07, 0.21 | <0.001 |
| 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 |
| 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) | 0.40 | 2.43 | 0.08, 0.72 | 0.015 |
| 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 |
| 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) | 0.94 | 31.9 | 0.88, 1.0 | <0.001 |
| 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 |
| 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) | 0.88 | 5.18 | 0.55, 1.2 | <0.001 |
| 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 |
| 1CI = Confidence Interval | | | | |
| R² = 0.472; F-statistic = 59.5; DF1 = 10; DF2 = 666; p-value = <0.001; No. Obs. = 677 | | | | |