**SUPPLEMENTARY MATERIALS**

Supplementary Figure 1: Causal diagram of relationship between predictors and health outcomes.

A picture containing game

Description automatically generated

Supplementary Table 1: List of models fit.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | Outcome | Predictors | Adjusters | Type |
| 1 | PTSD | Age  Gender  Race  Public benefits  Number of children  Years in Flint  Network size  Zipcode | None | Logistic |
| 2 | PTSD | Number of symptoms  Elevated BLL  Took blood test  Time to noticing issue | Age  Gender  Race  Public benefits  Number of children  Years in Flint  Network size  Zipcode | Logistic |
| 3 | PHQ | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Logistic |
| 4 | PHQ | Rashes  Hair loss  Nausea  Aggression  Elevated BLL  Took blood test  Time to noticing issue | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | Logistic |
| 5 | Rashes | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Logistic |
| 6 | Rashes | Hair loss  Nausea  Aggression  Elevated BLL  Took blood test  Time to noticing issue | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode  Rashes before | Logistic - Firth |
| 7 | Hair loss | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Logistic |
| 8 | Hair loss | Rashes  Nausea  Aggression  Elevated BLL  Took blood test  Time to noticing issue | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode  Hair loss before | Logistic - Firth |
| 9 | Nausea | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Logistic |
| 10 | Nausea | Rashes  Hair loss  Aggression  Elevated BLL  Took blood test  Time to noticing issue | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode  Nausea before | Logistic - Firth |
| 11 | Aggression | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Logistic |
| 12 | Aggression | Rashes  Hair loss  Nausea  Elevated BLL  Took blood test  Time to noticing issue | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode  Aggression before | Logistic - Firth |
| 13 | All symptoms | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Poisson |
| 14 | All symptoms | Elevated BLL  Took blood test  Time to noticing issue | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode  Rashes before  Hair loss before  Nausea before  Aggression before | Poisson |
| 15 | Elevated BLL | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Logistic - Firth |
| 16 | Got tested | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Logistic |
| 17 | Time to noticing issue | Age  Gender  Race  Public benefits  Marital status  Years in Flint  Network size  Zipcode | None | Linear: log transform |

The total number of hypothesis tests can be found by counting the number of entries in the Predictors column--all told, we tested 121 effects during modeling. Adjusters are variables included in order to unbiasedly estimate the Predictors, but their effects should not be interpreted beyond that, and they were not included in hypothesis testing.

Supplementary Figure 2: Sample exclusions used to move from a starting sample of 332 individuals surveyed in Flint, MI from June-October 2019 to a final analytic sample of 286 individuals.

A screenshot of a cell phone

Description automatically generated

Supplementary Table 2: Comparison of individuals included in final sample of 286 individuals to the 45 individuals who were excluded due to missingness in our sample of the population of Flint, MI from June-October 2019. Note that most differences are minor or explained by the fact that excluded individuals were missing responses to those items.

|  |  |  |  |
| --- | --- | --- | --- |
| **Predictor** | **Excluded** | **Included** | **P-value** |
| N | 45 | 286 |  |
| Age (mean (SD)) | 51.5 (16.6) | 47.3 (16.4) | 0.122 |
| Gender (N (%)) |  |  | 0.027 |
| Female | 23 (51.1) | 171 (59.8) |  |
| Male | 21 (46.7) | 115 (40.2) |  |
| Transgender woman | 1 ( 2.2) | 0 ( 0.0) |  |
| Education (N (%)) |  |  | 0.125 |
| < 9th grade | 4 ( 8.9) | 20 ( 7.0) |  |
| High school | 12 (26.7) | 89 (31.1) |  |
| Some college | 11 (24.4) | 89 (31.1) |  |
| Associate’s degree | 4 ( 8.9) | 43 (15.0) |  |
| College or more | 14 (31.1) | 45 (15.7) |  |
| Public benefits (N (%)) |  |  | 0.360 |
| Yes | 24 (53.3) | 182 (63.6) |  |
| No | 19 (42.2) | 90 (31.5) |  |
| Don’t know | 2 ( 4.4) | 14 ( 4.9) |  |
| Marital status (N (%)) |  |  | 0.044 |
| Married | 6 (13.3) | 60 (21.0) |  |
| Separated | 15 (33.3) | 51 (17.8) |  |
| Single | 24 (53.3) | 175 (61.2) |  |
| Number of children (mean (SD)) | 0.6 (1.1) | 0.9 (1.4) | 0.184 |
| Years in Flint (mean (SD)) | 39.5 (17.7) | 33.5 (19.2) | 0.041 |
| Number of confidants (mean (SD)) | 3.2 (3.2) | 3.0 (2.1) | 0.785 |
| How long to notice (mean (SD)) | 3.3 (5.3) | 5.3 (6.7) | 0.072 |
| Received blood test (N (%)) |  |  | 0.820 |
| Yes | 16 (43.2) | 115 (40.2) |  |
| No | 19 (51.4) | 160 (55.9) |  |
| Unsure | 2 ( 5.4) | 11 ( 3.8) |  |
| Elevated BLLs (N (%)) |  |  | 0.529 |
| Yes | 2 ( 6.2) | 31 (10.8) |  |
| No | 30 (93.8) | 250 (87.4) |  |
| Unsure | 0 ( 0.0) | 5 ( 1.7) |  |
| Rashes (N (%)) |  |  | 0.667 |
| Yes | 20 (52.6) | 139 (48.6) |  |
| No | 18 (47.4) | 142 (49.7) |  |
| Unsure | 0 ( 0.0) | 5 ( 1.7) |  |
| Hair loss (N (%)) |  |  | 0.218 |
| Yes | 11 (29.7) | 123 (43.0) |  |
| No | 24 (64.9) | 156 (54.5) |  |
| Unsure | 2 ( 5.4) | 7 ( 2.4) |  |
| Nausea (N (%)) |  |  | 0.496 |
| Yes | 4 (23.5) | 98 (34.3) |  |
| No | 12 (70.6) | 181 (63.3) |  |
| Unsure | 1 ( 5.9) | 7 ( 2.4) |  |
| Irritability (N (%)) |  |  | 0.279 |
| Yes | 4 (26.7) | 123 (43.0) |  |
| No | 11 (73.3) | 152 (53.1) |  |
| Unsure | 0 ( 0.0) | 11 ( 3.8) |  |
| Total symptoms (mean (SD)) | 1.2 (1.6) | 1.7 (1.4) | 0.255 |
| PTSD = Yes (N (%)) | 5 (11.1) | 91 (31.8) | 0.008 |
| Depression = Yes (N (%)) | 4 ( 8.9) | 83 (29.0) | 0.008 |