**Supporting Material – Supplementary tables S1-S5**

Table S1. Descriptive summary of the study variables used.

|  |  |  |
| --- | --- | --- |
| S.No | **Variable** | **Mean ± SD, N** |
| 1 | Sex ratio at birth (SRB) | 1.051 ± 0.02, 94 |
| 2 | Toxoplasmosis prevalence (%) | 33.15±18.82, 94 |
| 3 | Log Wealth | 3.997± 0.56, 94 |
| 4 | Total fertility | 2.62± 1.34, 94 |
| 5 | Mother age | 26.52± 3.11, 94 |
| 6 | Polygyny intensity | 0.459± 0.32, 94 |
| 7 | Son preference | 0.22± 0.21, 94 |
| 8 | Latitude | 29.31± 17.97, 94 |
| 9 | Parasite stress | 3.12± 0.77, 94 |
| 10 | Nutrition stress | 2.39± 0.42, 94 |
| 11 | Contraceptive use | 56.25± 21.13, 94 |
| 12 | Humidity (%) | 60.48 ± 17.05, 94 |
| 13 | Sanitation rates (%) | 81.07 ± 27.55, 62 |
| 14 | Meat Consumption (grams) | 60.57 ±32.05, 65 |
| 15 | Cat ownership (per capita) | 0.149± 0.37, 62 |

Table S2. Pearson's correlation coefficient matrix of the study variables

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | | **3** | | **4** | | **5** | | **6** | | **7** | | **8** | | **9** | | **10** | | **11** | | **12** | | **13** | | **14** | | **15** | |
| **SRB** | 1 | -0.52\*\* | | -0.41\*\* | | -0.59\*\* | | 0.37\*\* | | 0.19 | | 0.39\*\* | | -0.17 | | -0.34\*\* | | -0.33\*\* | | 0.44\*\* | | -0.56\*\* | | 0.42\*\* | | 0.30\* | | -0.04 | |
| **Parasite stress** | -0.52\*\* | 1 | | 0.87\*\* | | 0.82\*\* | | -0.84\*\* | | -0.55\*\* | | -0.77\*\* | | 0.1 | | 0.31\*\* | | 0.32\*\* | | -0.29\*\* | | 0.91\*\* | | -0.63\*\* | | -0.87\*\* | | 0.02 | |
| **Nutrition stress** | -0.41\*\* | 0.87\*\* | | 1 | | 0.76\*\* | | -0.82\*\* | | -0.46\*\* | | -0.68\*\* | | 0.06 | | 0.30\*\* | | 0.31\*\* | | -0.09 | | 0.82\*\* | | -0.60\*\* | | -0.84\*\* | | 0.02 | |
| **Fertility** | -0.59\*\* | 0.82\*\* | | 0.76\*\* | | 1 | | -0.81\*\* | | -0.40\*\* | | -0.62\*\* | | 0.11 | | 0.29\*\* | | 0.39\*\* | | -20.68 | | 0.91\*\* | | -0.72\*\* | | -0.82\*\* | | -0.09 | |
| **Log wealth** | 0.37\*\* | -0.84\*\* | | -0.82\*\* | | -0.81\*\* | | 1 | | 0.55\*\* | | 0.66\*\* | | -0.12 | | -0.40\*\* | | -0.16 | | 0.2 | | -0.87\*\* | | 0.61\*\* | | 0.90\*\* | | 0.03 | |
| **Maternal** | 0.19 | -0.55\*\* | | -0.46\*\* | | -0.40\*\* | | 0.55\*\* | | 1 | | 0.53\*\* | | -0.13 | | -0.33\*\* | | 0.01 | | 0.24\* | | -0.49\*\* | | 0.23\* | | 0.58\*\* | | 0.04 | |
| **Latitude** | 0.39\*\* | -0.77\*\* | | -0.68\*\* | | -0.62\*\* | | 0.66\*\* | | 0.53\*\* | | 1 | | -0.19 | | -0.42\*\* | | -0.13 | | 0.32\*\* | | -0.64\*\* | | 0.49\*\* | | 0.68\*\* | | 0.11 | |
| **Humidity** | -0.17 | 0.1 | | 0.06 | | 0.11 | | -0.12 | | -0.13 | | -0.19 | | 1 | | 0.24\* | | -0.08 | | -0.29\*\* | | 0.09 | | 0.14 | | -0.15 | | -0.07 | |
| **Toxoplasmosis** | -0.34\*\* | 0.31\*\* | | 0.30\*\* | | 0.29\*\* | | -0.40\*\* | | -0.33\*\* | | -0.42\*\* | | 0.24\*\* | | 1 | | -0.09 | | -19.74 | | 0.30\*\* | | -21.62 | | -0.23 | | 0 | |
| **Polygyny** | -0.33\*\* | 0.32\*\* | | 0.31\*\* | | 0.39\*\* | | -0.16 | | 0.01 | | -0.13 | | -0.08 | | -0.09 | | 1 | | 0.04 | | 0.39\*\* | | -0.42\*\* | | -0.24 | | 0.04 | |
| **Son preference** | 0.44\*\* | -0.29\*\* | | -0.09 | | -20.68 | | 0.2 | | 0.24\* | | 0.32\*\* | | -0.29\*\* | | -19.74 | | 0.04 | | 1 | | -0.26\*\* | | 0.05 | | 0.13 | | -0.03 | |
| **Health factor** | -0.56\*\* | 0.91\*\* | | 0.82\*\* | | 0.91\*\* | | -0.87\*\* | | -0.49\*\* | | -0.64\*\* | | 0.09 | | 0.30\*\* | | 0.39\*\* | | -0.26\*\* | | 1 | | -0.73\*\* | | -0.89\*\* | | 0.04 | |
| **Contraceptive use** | 0.42\*\* | -0.63\*\* | | -0.60\*\* | | -0.72\*\* | | 0.61\*\* | | 0.23\* | | 0.49\*\* | | 0.14 | | -21.62 | | -0.42\*\* | | 0.05 | | -0.73\*\* | | 1 | | 0.61\*\* | | 0.01 | |
| **Sanitation rate** | 0.30\* | -0.87\*\* | | -0.84\*\* | | -0.82\*\* | | 0.90\*\* | | 0.58\*\* | | 0.68\*\* | | -0.15 | | -0.23 | | -0.24 | | 0.13 | | -0.89\*\* | | 0.61\*\* | | 1 | | -0.02 | |
| **Cat ownership** | -0.04 | 0.02 | | 0.02 | | -0.09 | | 0.03 | | 0.04 | | 0.11 | | -0.07 | | 0 | | 0.04 | | -0.03 | | 0.04 | | 0.01 | | -0.02 | | 1 | |
| **Meat con-sumption** | 0.27 | | -0.8 | | -0.84 | | -0.63 | | 0.81 | | 0.55 | | 0.64 | | -0.08 | | -0.2 | | -0.2 | | 0.16 | | -0.74 | | 0.49 | | 0.77 | | 0.03 |

\* denotes p < .05, \*\* p < .01

Table S3. Categorical regression analysis (CATREG) of sex ratio at birth on toxoplasmosis prevalence and known independent variables for European countries (N = 30).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Toxoplasmosis prevalence not included** |  | **Toxoplasmosisprevalence (adjusted) included** |  | **Toxoplasmosis prevalence (unadjusted) included** |
| **R2 (adj.)** | .585 (.249) |  | .613 (.298) |  | .607 (.330) |
| **F** | 1.310 |  | 1.411 |  | 1.608 |
| **Δ R2** |  |  | .028 |  | .022 |
| Contraceptive use | -.165\* |  | -.156\* |  | -.157\* |
| Fertility | -.024 |  | -.030 |  | -.029 |
| Health factor | -.049 |  | -.058 |  | -.055 |
| Latitude | -.205\*\*\* |  | -.209\*\*\* |  | -.209\*\*\* |
| Log wealth | -.190\*\*\* |  | -.186\*\*\* |  | -.187\*\*\* |
| Mother age | .101 |  | .094 |  | .100† |
| Nutrition stress | -.057 |  | -.045 |  | -.048 |
| Parasite stress | .089\* |  | .095\* |  | .098\* |
| Polygyny intensity | .059 |  | .066 |  | .065 |
| Son preference | -.048 |  | -.044 |  | -.049 |
| *Toxoplasma* prevalence |  |  | -.086† |  | -.076 |

Δ R2 in the two models in which toxoplasmosis prevalence has been included refers to a change in R2 relative to the model in which the variable has not been included. \* denotes p < .05, \*\* p < .01, and \*\*\* p < .001, † denotes a trend at p < .1.

Table S4. Categorical regression analysis (CATREG) of sex ratio at birth on toxoplasmosis prevalence and known independent variables for non-European countries (N = 64).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Toxoplasmosis prevalence not included** |  | **Toxoplasmosisprevalence (adjusted) included** |  | **Toxoplasmosis prevalence (unadjusted) included** |
| **R2 (adj.)** | .640 (.547) |  | .660 (.554) |  | .659 (.552) |
| **F** | 5.208\*\*\* |  | 4.685\*\*\* |  | 4.682\*\*\* |
| **Δ R2** |  |  | .020† |  | .019† |
| Contraceptive use | .107\*\*\* |  | .103\*\*\* |  | .101\*\*\* |
| Fertility | -.122\*\*\* |  | -.120\*\*\* |  | -.119\*\*\* |
| Health factor | .099\*\* |  | .095\*\* |  | .094\*\* |
| Latitude | .032 |  | .020 |  | .021 |
| Log wealth | .002 |  | -.008 |  | -.008 |
| Mother age | -.025 |  | -.032 |  | -.027 |
| Nutrition stress | .025 |  | .021 |  | .021 |
| Parasite stress | -.084\* |  | -.087\* |  | -.088\* |
| Polygyny intensity | -.065 |  | -.075 |  | -.075 |
| Son preference | .299\*\* |  | .292\*\* |  | .291\*\* |
| *Toxoplasma* prevalence |  |  | -.092\* |  | -.094\* |

Δ R2 in the two models in which toxoplasmosis prevalence has been included refers to a change in R2 relative to the model in which the variable has not been included. \* denotes p < .05, \*\* p < .01, and \*\*\* p < .001, † denotes a trend at p < .1.

Table S5. Side-by-side comparison of categorical regressions of sex ratio at birth on known confounding factors (excluding son preference) and toxoplasmosis prevalence (both adjusted and unadjusted for mother age), respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Toxoplasmosis prevalence not included** |  | **Toxoplasmosis prevalence (adjusted) included** |  | **Toxoplasmosis prevalence (unadjusted) included** |
| **R2 (adj.)** | .345 (.267) |  | .389 (.307) |  | .387 (.305) |
| **F** | 4.066\*\*\* |  | 4.305\*\*\* |  | 4.280\*\*\* |
| **Δ R2** |  |  | .044\* |  | .042\* |
| Contraceptive use | .065 |  | .062 |  | .061 |
| Fertility | -.156\*\*\* |  | -.153\*\*\* |  | -.153\*\*\* |
| Health factor | .095\*\*\* |  | .086\*\*\* |  | .087\*\*\* |
| Latitude | .057 |  | .043 |  | .046 |
| Log wealth | -.004 |  | -.014 |  | -.014 |
| Mother age | -.011 |  | -.020 |  | -.013 |
| Nutrition stress | -.024 |  | -.022 |  | -.022 |
| Parasite stress | -.098\*\*\* |  | -.098\*\*\* |  | -.099\*\*\* |
| Polygyny intensity | -.090† |  | -.101\*\* |  | -.101\*\* |
| Toxoplasmosisprevalence |  |  | -.117\*\* |  | -.114\*\* |

Δ R2 in the two models in which toxoplasmosis prevalence has been included refers to a change in R2 relative to the model in which the variable has not been included. \* denotes p < .05, \*\* p < .01, † denotes a trend at p < .1.

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