|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Risk factor** | **Outcome category** | **Risk factor category** | **Age-adjusted** | | | | **Multivariable** | | | |
|  |  |  | **RR** | **P value** | **95% CI-LOW** | **95% CI-HIGH** | **RR** | **P value** | **95% CI-LOW** | **95% CI-HIGH** |
| **Childhood factors** | | | | | | | | | | |
| **Sex** | B vs. A | Female vs. Male | 0.988 | 0.956 | 0.637 | 1.533 |  |  |  |  |
|  | Mixed vs. A |  | 1.170 | 0.705 | 0.518 | 2.642 |  |  |  |  |
|  | Mixed vs. B |  | 1.185 | 0.684 | 0.524 | 2.680 |  |  |  |  |
| **Breastfeeding** | B vs. A | 7-12 vs. 0-6 m | 1.350 | 0.420 | 0.651 | 2.801 |  |  |  |  |
|  | Mixed vs. A |  | 1.793 | 0.501 | 0.327 | 9.826 |  |  |  |  |
|  | Mixed vs. B |  | 1.329 | 0.745 | 0.240 | 7.367 |  |  |  |  |
|  | B vs. A | >12 vs. 0-6 m | 1.328 | 0.437 | 0.649 | 2.717 |  |  |  |  |
|  | Mixed vs. A |  | 2.995 | 0.190 | 0.580 | 15.466 |  |  |  |  |
|  | Mixed vs. B |  | 2.255 | 0.335 | 0.432 | 11.772 |  |  |  |  |
| **Birth order** | B vs. A | 3rd-4th vs. 1st-2nd | 1.350 | 0.420 | 0.651 | 2.801 |  |  |  |  |
|  | Mixed vs. A |  | 1.793 | 0.501 | 0.327 | 9.826 |  |  |  |  |
|  | Mixed vs. B |  | 1.329 | 0.745 | 0.240 | 7.367 |  |  |  |  |
|  | B vs. A | >=5th vs. 1st-2nd | 1.328 | 0.437 | 0.649 | 2.717 |  |  |  |  |
|  | Mixed vs. A |  | 2.995 | 0.190 | 0.580 | 15.466 |  |  |  |  |
|  | Mixed vs. B |  | 2.255 | 0.335 | 0.432 | 11.772 |  |  |  |  |
| **Any daycare to 3 years** | B vs. A | Yes vs. No | 1.241 | 0.426 | 0.729 | 2.114 |  |  |  |  |
|  | Mixed vs. A |  | 1.406 | 0.474 | 0.553 | 3.574 |  |  |  |  |
|  | Mixed vs. B |  | 1.133 | 0.795 | 0.442 | 2.900 |  |  |  |  |
| ***A. lumbricoides* (tv)** | B vs. A | Yes vs. No | **2.853** | **0.001** | **1.538** | **5.295** |  |  |  |  |
|  | Mixed vs. A |  | 1.077 | 0.916 | 0.272 | 4.266 |  |  |  |  |
|  | Mixed vs. B |  | 0.377 | 0.146 | 0.101 | 1.404 |  |  |  |  |
| ***T. trichiura* (tv)** | B vs. A | Yes vs. No | **2.570** | **0.012** | **1.227** | **5.383** |  |  |  |  |
|  | Mixed vs. A |  | 2.432 | 0.190 | 0.644 | 9.185 |  |  |  |  |
|  | Mixed vs. B |  | 0.947 | 0.931 | 0.274 | 3.265 |  |  |  |  |
| **Any STH (tv)** | B vs. A | Yes vs. No | **3.072** | **<0.001** | **1.798** | **5.251** | **2.815** | **<0.001** | **1.620** | **4.889** |
|  | Mixed vs. A |  | 0.975 | 0.967 | 0.289 | 3.284 | 0.923 | 0.899 | 0.266 | 3.198 |
|  | Mixed vs. B |  | 0.317 | 0.054 | 0.099 | 1.018 | 0.328 | 0.066 | 0.100 | 1.077 |
| **Maternal factors** | | | | | | | | | | |
| **Age (yrs)** | B vs. A | 21-29 vs. <=20 | 1.020 | 0.942 | 0.602 | 1.728 |  |  |  |  |
|  | Mixed vs. A |  | 0.656 | 0.390 | 0.251 | 1.715 |  |  |  |  |
|  | Mixed vs. B |  | 0.644 | 0.369 | 0.247 | 1.681 |  |  |  |  |
|  | B vs. A | >=30 vs. <=20 | 0.803 | 0.478 | 0.438 | 1.473 |  |  |  |  |
|  | Mixed vs. A |  | 0.721 | 0.555 | 0.244 | 2.133 |  |  |  |  |
|  | Mixed vs. B |  | 0.898 | 0.847 | 0.302 | 2.670 |  |  |  |  |
| **Ethnicity** | B vs. A | Non-Afro. vs. Afro. | **0.511** | **0.006** | **0.317** | **0.824** | 0.684 | 0.205 | 0.380 | 1.230 |
|  | Mixed vs. A |  | 0.534 | 0.155 | 0.225 | 1.268 | 1.479 | 0.497 | 0.478 | 4.575 |
|  | Mixed vs. B |  | 1.045 | 0.920 | 0.442 | 2.467 | 2.161 | 0.175 | 0.710 | 6.583 |
| **Education** | B vs. A | Primary vs. Illit | 0.581 | 0.137 | 0.284 | 1.188 |  |  |  |  |
|  | Mixed vs. A |  | 0.396 | 0.131 | 0.119 | 1.316 |  |  |  |  |
|  | Mixed vs. B |  | 0.682 | 0.520 | 0.213 | 2.186 |  |  |  |  |
|  | B vs. A | Second vs. Illit | 0.451 | 0.052 | 0.202 | 1.007 |  |  |  |  |
|  | Mixed vs. A |  | 0.716 | 0.615 | 0.194 | 2.636 |  |  |  |  |
|  | Mixed vs. B |  | 1.586 | 0.479 | 0.443 | 5.679 |  |  |  |  |
| **Maternal STH** | B vs. A | Yes vs. No | **1.888** | **0.005** | **1.216** | **2.930** | **1.603** | **0.042** | **1.017** | **2.529** |
|  | Mixed vs. A |  | 1.194 | 0.678 | 0.518 | 2.751 | 1.228 | 0.645 | 0.513 | 2.940 |
|  | Mixed vs. B |  | 0.632 | 0.281 | 0.275 | 1.455 | 0.766 | 0.546 | 0.322 | 1.823 |
| **Household factors** | | | | | | | | | | |
| **Area of residence** | B vs. A | Rural vs. Urban | 0.772 | 0.308 | 0.469 | 1.269 |  |  |  |  |
|  | Mixed vs. A |  | 0.757 | 0.570 | 0.290 | 1.978 |  |  |  |  |
|  | Mixed vs. B |  | 0.981 | 0.969 | 0.374 | 2.574 |  |  |  |  |
| **Socio-economic status** | B vs. A | Medium vs. Low | 0.809 | 0.458 | 0.461 | 1.418 |  |  |  |  |
|  | Mixed vs. A |  | 0.671 | 0.467 | 0.229 | 1.964 |  |  |  |  |
|  | Mixed vs. B |  | 0.830 | 0.733 | 0.284 | 2.427 |  |  |  |  |
|  | B vs. A | High vs. Low | 0.823 | 0.504 | 0.464 | 1.458 |  |  |  |  |
|  | Mixed vs. A |  | 1.138 | 0.806 | 0.405 | 3.192 |  |  |  |  |
|  | Mixed vs. B |  | 1.383 | 0.536 | 0.495 | 3.863 |  |  |  |  |
| **Monthly income (US$)** | B vs. A | >1 vs. <1 salary | 0.865 | 0.152 | 0.710 | 1.055 |  |  |  |  |
|  | Mixed vs. A |  | 0.933 | 0.696 | 0.657 | 1.323 |  |  |  |  |
|  | Mixed vs. B |  | 1.078 | 0.679 | 0.755 | 1.538 |  |  |  |  |
| **House construction** | B vs. A | Cement/brick vs | 0.785 | 0.386 | 0.454 | 1.357 |  |  |  |  |
|  | Mixed vs. A | Wood/bamboo | 0.528 | 0.183 | 0.207 | 1.351 |  |  |  |  |
|  | Mixed vs. B |  | 0.673 | 0.404 | 0.266 | 1.705 |  |  |  |  |
| **Material goods** | B vs. A | 3-4 vs. 1-2 | 0.985 | 0.946 | 0.632 | 1.535 |  |  |  |  |
|  | Mixed vs. A |  | 0.780 | 0.553 | 0.344 | 1.769 |  |  |  |  |
|  | Mixed vs. B |  | 0.792 | 0.578 | 0.349 | 1.800 |  |  |  |  |
| **Overcrowding** | B vs. A | >=3 vs. <3 pers | 1.236 | 0.353 | 0.791 | 1.931 |  |  |  |  |
|  | Mixed vs. A |  | 1.140 | 0.756 | 0.498 | 2.610 |  |  |  |  |
|  | Mixed vs. B |  | 0.923 | 0.849 | 0.403 | 2.113 |  |  |  |  |
| **Agriculture (tv)** | B vs. A | Yes vs. No | 0.876 | 0.554 | 0.565 | 1.359 |  |  |  |  |
|  | Mixed vs. A |  | 0.856 | 0.712 | 0.375 | 1.953 |  |  |  |  |
|  | Mixed vs. B |  | 0.977 | 0.956 | 0.428 | 2.234 |  |  |  |  |
| **Bathroom (tv)** | B vs. A | Yes vs. No | 0.888 | 0.632 | 0.545 | 1.445 |  |  |  |  |
|  | Mixed vs. A |  | 0.512 | 0.150 | 0.206 | 1.274 |  |  |  |  |
|  | Mixed vs. B |  | 0.577 | 0.222 | 0.239 | 1.395 |  |  |  |  |
| **Peri-domiciliary animals** | | | | | | | | | | |
| **Cats (tv)** | B vs. A | Yes vs. No | 0.798 | 0.543 | 0.386 | 1.651 |  |  |  |  |
|  | Mixed vs. A |  | 1.022 | 0.971 | 0.322 | 3.237 |  |  |  |  |
|  | Mixed vs. B |  | 1.280 | 0.673 | 0.407 | 4.032 |  |  |  |  |
| **Dogs (tv)** | B vs. A | Yes vs. No | 1.097 | 0.821 | 0.492 | 2.447 |  |  |  |  |
|  | Mixed vs. A |  | 0.588 | 0.491 | 0.130 | 2.665 |  |  |  |  |
|  | Mixed vs. B |  | 0.536 | 0.413 | 0.120 | 2.391 |  |  |  |  |
| **Pigs (tv)** | B vs. A | Yes vs. No | 0.902 | 0.695 | 0.539 | 1.510 |  |  |  |  |
|  | Mixed vs. A |  | 1.397 | 0.488 | 0.543 | 3.594 |  |  |  |  |
|  | Mixed vs. B |  | 1.549 | 0.350 | 0.618 | 3.878 |  |  |  |  |
| **Chickens (tv)** | B vs. A | Yes vs. No | 1.014 | 0.947 | 0.675 | 1.523 |  |  |  |  |
|  | Mixed vs. A |  | 0.739 | 0.458 | 0.333 | 1.641 |  |  |  |  |
|  | Mixed vs. B |  | 0.729 | 0.427 | 0.335 | 1.590 |  |  |  |  |
| **Cows(tv)** | B vs. A | Yes vs. No | 0.990 | 0.984 | 0.381 | 2.575 |  |  |  |  |
|  | Mixed vs. A |  | 3.516 | 0.089 | 0.825 | 14.976 |  |  |  |  |
|  | Mixed vs. B |  | 3.550 | 0.073 | 0.890 | 14.159 |  |  |  |  |
| **Horses (tv)** | B vs. A | Yes vs. No | 0.698 | 0.343 | 0.331 | 1.469 |  |  |  |  |
|  | Mixed vs. A |  | 1.100 | 0.897 | 0.261 | 4.626 |  |  |  |  |
|  | Mixed vs. B |  | 1.576 | 0.531 | 0.380 | 6.540 |  |  |  |  |
| **Donkeys (tv)** | B vs. A | Yes vs. No | 0.497 | 0.226 | 0.160 | 1.541 |  |  |  |  |
|  | Mixed vs. A |  | 0.727 | 0.786 | 0.073 | 7.246 |  |  |  |  |
|  | Mixed vs. B |  | 1.461 | 0.747 | 0.146 | 14.639 |  |  |  |  |
| **Mules (tv)** | B vs. A | Yes vs. No | 1.044 | 0.925 | 0.424 | 2.570 |  |  |  |  |
|  | Mixed vs. A |  | 0.605 | 0.656 | 0.066 | 5.515 |  |  |  |  |
|  | Mixed vs. B |  | 0.579 | 0.623 | 0.066 | 5.098 |  |  |  |  |
| **Any equine (tv)** | B vs. A | Yes vs. No | 0.754 | 0.421 | 0.379 | 1.500 |  |  |  |  |
|  | Mixed vs. A |  | 0.954 | 0.947 | 0.237 | 3.843 |  |  |  |  |
|  | Mixed vs. B |  | 1.265 | 0.737 | 0.320 | 5.004 |  |  |  |  |

**S3 Table: Age-adjusted and multivariable effects of childhood, parental, and household factors on the relative risk of infections with *G. lamblia* assemblages A vs. B and mixed (A and B) vs. A or B.**

Age-adjusted analyses include polynomial terms for age up to power of 5 (all P<0.001). RR – relative risk. CI – confidence interval. Time varying (tv) variables. Data on household factors were collected around the time of birth of the child unless specified as tv. Material goods – number of household electrical goods. Pigs, chickens, cows, and equines – keeping these animals around house. Agriculture – child lives on a farm or visits a farm at least once a week. STH – soil-transmitted helminth infection. Non-Afro – non-Afro-Ecuadorian. yrs – years. m – months. SES -socioeconomic status. Overcrowding – persons/sleeping room. Statistically significant findings (P<0.05) are shown in bold.