| Table 1. Point estimates (and 95% intervals) for the associationsᵃ between first-trimester metal concentrations and child SRS scores (indicates autistic-like behaviors) using various quantile regression methods, the MIREC Study, Canada, 2008-2011 (n = 568). | | | | |
| --- | --- | --- | --- | --- |
| Quantile Regression Method | Chemical name | beta (95% intervals) | | |
| τ = 0.1 | τ = 0.5 | τ = 0.9 |
| Binary chemical concentrations (above versus below median) | | | | |
| Standard  (undithered)  frequentistᵇ | Arsenic | -0.5000 (-0.9560, 1.2897) | 0.2500 (-1.0193, 1.5129) | -0.6667 (-2.5084, 0.9878) |
| Cadmium | -1.0000 (-1.0000, 0.6646) | 1.0000 (-0.6215, 1.0000) | 1.0000 (-0.8748, 3.7520) |
| Lead | 0.5000 (-0.9416, 1.4345) | 0.0000 (-1.1454, 1.5533) | 0.3333 (-1.4761, 1.9343) |
| Mercury | -0.6667 (-1.4153, 0.7582) | -0.3333 (-1.7160, 0.9206) | -1.3333 (-3.4121, 0.1234) |
| Dithered  frequentistᵇ | Arsenic | -0.3162 (-1.1462, 1.1535) | 0.4962 (-1.0361, 1.2205) | -0.6729 (-2.4828, 1.2481) |
| Cadmium | -0.1566 (-1.1320, 0.8887) | 0.7034 (-0.6741, 1.6000) | 0.8932 (-0.9564, 3.6444) |
| Lead | -0.1327 (-0.9530, 1.3664) | 0.1195 (-0.9775, 1.4388) | 0.0416 (-1.7129, 1.7562) |
| Mercury | -0.5095 (-1.3300, 0.4815) | -0.3711 (-1.4653, 0.8925) | -1.4129 (-2.8419, -0.1503) |
| Undithered  Bayesianᶜ | Arsenic | -0.1238 (-0.9248, 0.6601) | 0.2804 (-0.3013, 0.8637) | -0.7753 (-1.7708, 0.2731) |
| Cadmium | -0.2732 (-1.0250, 0.4715) | 0.5297 (-0.0790, 1.1193) | 1.2340 (0.1367, 2.3453) |
| Lead | 0.3505 (-0.4341, 1.1133) | 0.1584 (-0.4905, 0.8259) | 0.2538 (-0.7325, 1.2767) |
| Mercury | -0.2809 (-1.0728, 0.5215) | -0.3149 (-0.9581, 0.3165) | -1.3923 (-2.3334, -0.3920) |
| Continuous log2-transformed chemical concentrations | | | | |
| Standard  (undithered)  frequentistᵇ | Arsenic | -0.1990 (-0.8641, 0.6308) | -0.0420 (-0.7908, 0.3053) | 0.3153 (-0.8368, 1.3799) |
| Cadmium | -0.4042 (-0.8650, 0.2812) | 0.0000 (-0.5218, 0.7291) | 0.4162 (-0.6869, 1.7989) |
| Lead | 0.5169 (-0.6441, 1.2583) | 0.2014 (-0.6603, 1.3104) | 0.4057 (-1.5029, 1.9234) |
| Mercury | -0.2146 (-0.6073, 0.2022) | 0.0000 (-0.4614, 0.2788) | -0.1916 (-0.7945, 0.4429) |
| Dithered  frequentistᵇ | Arsenic | -0.2295 (-0.9649, 0.5631) | -0.1194 (-0.7562, 0.4303) | 0.1535 (-0.9151, 1.6073) |
| Cadmium | -0.4292 (-0.7748, 0.2452) | -0.0145 (-0.4159, 0.7709) | 0.3559 (-0.6320, 1.9285) |
| Lead | 0.5043 (-0.5687, 1.0906) | 0.2482 (-0.6724, 1.2712) | 0.2076 (-1.1843, 2.0486) |
| Mercury | -0.1761 (-0.5767, 0.1180) | -0.0108 (-0.4565, 0.2291) | -0.3408 (-0.9080, 0.5037) |
| Undithered  Bayesianᶜ | Arsenic | -0.2238 (-0.6999, 0.2455) | -0.1629 (-0.4933, 0.1501) | 0.2065 (-0.3772, 0.7908) |
| Cadmium | -0.3964 (-0.7976, 0.0075) | 0.0222 (-0.2904, 0.3427) | 0.5015 (-0.0486, 1.0431) |
| Lead | 0.5083 (-0.0438, 1.0527) | 0.2982 (-0.2225, 0.8085) | 0.7461 (-0.0608, 1.5330) |
| Mercury | -0.1801 (-0.4738, 0.1095) | -0.0378 (-0.2382, 0.1539) | -0.2390 (-0.5739, 0.1001) |
| a: Controls for child sex, family income, maternal education, maternal age, self-identified maternal Race, parity, maternal cigarette smoking during pregnancy, and whether the mother lives with their partner. Point estimates are rounded to four decimal places to demonstrate that many of them are rational numbers or integers. b: The default rank-based confidence intervals are used. See Table S1 or Figure S1 for results with xy-bootstrapped confidence intervals.  c: The default unadjusted posterior credible intervals are used. See Table S1 or Figure S1 for results with adjusted posterior credible intervals | | | | |