**Supplemental File**

**Association between fluoride exposure and behavioral outcomes of school-age children: A pilot study in China**

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**Table S1. Comparison of CPRS-48 scores in non-father migrated and father migrated.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CPRS-48 Scores** | **Father migrated** | | ***t*** | | ***P*** |
| **No** | **Yes** |
| Conduct problems | 46.59 ± 10.38 | 46.08±10.39 | 0.439 | 0.661 | |
| Learning problems | 48.72 ± 11.20 | 48.40 ±10.67 | 0.262 | 0.794 | |
| Psychosomatic problems | 48.37 ± 9.96 | 49.12 ± 12.37 | 0.638 | 0.529 | |
| Impulsive-hyperactive | 49.03 ± 11.93 | 49.12 ± 12.36 | 0.067 | 0.947 | |
| Anxiety | 50.76 ± 12.85 | 50.27 ± 11.38 | 0.363 | 0.717 | |
| ADHD index | 47.85 ± 11.13 | 47.64 ± 10.44 | 0.177 | 0.860 | |

**Table S2. T-scores (CPRS-48) of study population (*n* = 325).**

|  |  |
| --- | --- |
| **CPRS-48 Scores** | **Mean ± SD** |
| Conduct problems | 46.37 ± 10.40 |
| Learning problems | 48.64 ± 11.00 |
| Psychosomatic problems | 48.76 ± 10.90 |
| Impulsive-hyperactive | 49.11 ± 12.14 |
| Anxiety | 50.63 ± 12.30 |
| ADHD index | 47.82 ± 10.83 |

**Table S3. Comparison of CPRS-48 scores in different gender.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CPRS-48 Scores** | **Boys** | **Girls** | ***t*** | ***P*** |
| Conduct problems | 46.05 ± 9.50 | 46.60 ± 11.03 | 0.466 | 0.642 |
| Learning problems | 48.57 ± 10.65 | 48.69 ± 11.29 | 0.093 | 0.926 |
| Psychosomatic problems | 48.24 ± 9.42 | 49.15 ± 11.88 | 0.748 | 0.455 |
| Impulsive-hyperactive | 47.97 ± 12.14 | 49.95 ± 12.11 | 1.447 | 0.149 |
| Anxiety | 50.19 ± 11.22 | 50.95± 13.05 | 0.547 | 0.585 |
| ADHD index | 47.34 ± 10.65 | 48.17 ± 10.97 | 0.677 | 0.499 |

**Table S4. Relation between UF and CPRS-48 scores in different adjusted models using multiple linear regression.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Fluoride**  **Content**  **(mg/L)** | **Conduct problems**  ***β* (95% *CI*)** | **Learning problems**  ***β* (95% *CI*)** | **Psychosomatic**  **problems**  ***β* (95% *CI*)** | **Impulsive-hyperactive**  ***β* (95% *CI*)** | **Anxiety**  ***β* (95% *CI*)** | **ADHD index**  ***β* (95% *CI*)** |
| **Adjustedab** | –0.07 (–1.17, 1.03) | 0.32 (–0.84, 1.49) | 3.74 (2.66, 4.82) | 0.91 (–0.37, 2.19) | 0.63 (–0.67, 1.93) | 0.32 (–0.82, 1.47) |
| **Adjustedac** | –0.43 (–1.69, 0.83) | 0.37 (–0.97, 1.71) | 4.01 (2.76, 5.25) | 0.25 (–1.23, 1.72) | 0.58 (–0.93, 2.08) | 0.15 (–1.17, 1.47) |
| **Adjustedad** | –0.33 (–1.50, 0.84) | 0.29 (–0.94, 1.52) | 3.82 (2.67, 4.97) | 1.02 (–0.34, 2.39) | 0.86 (–0.52, 2.25) | 0.56 (–0.66, 1.78) |
| **Adjustedae** | –0.07 (–1.18, 1.03) | 0.30 (–0.87, 1.46) | 3.74 (2.66, 4.83) | 0.88 (–0.41, 2.17) | 0.67 (–0.61, 1.95) | 0.32 (–0.82, 1.46) |

Abbreviation: *β*, regression coefficient; *CI*, confidence interval.

aThe assessment of *β* and 95% *CI* for every 1.0 mg/L increment of urinary fluoride.

bUnadjusted covariates.

cAdjusted: urinary creatinine.

dAdjusted: BMI, age and gender.

eAdjusted: mother migrated and father migrated.

**Table S5. Relation between UF and significant behavioral problem in different adjusted models using logistic regression**.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Fluoride**  **Content**  **(mg/L)** | **Conduct problems**  ***OR* (95% *CI*)** | **Learning problems**  ***OR* (95% *CI*)** | **Psychosomatic**  **problems**  ***OR* (95% *CI*)** | **Impulsive-hyperactive**  ***OR* (95% *CI*)** | **Anxiety**  ***OR* (95% *CI*)** | **ADHD index**  ***OR* (95% *CI*)** |
| **Adjustedab** | 1.06 (0.64, 1.74) | 0.91 (0.51, 1.62) | 2.07 (1.25, 3.46) | 0.93 (0.58, 1.48) | 0.95 (0.64, 1.43) | 0.72 (0.38, 1.34) |
| **Adjustedac** | 1.12 (0.67, 1.88) | 0.89 (0.45, 1.74) | 2.00 (1.12, 3.56) | 0.79 (0.49, 1.41) | 0.84 (0.51, 1.39) | 0.76 (0.37, 1.56) |
| **Adjustedad** | 1.00 (0.58, 1.72) | 1.00 (0.59, 1.69) | 1.90 (1.16, 3.12) | 0.90 (0.54, 1.49) | 1.02 (0.70, 1.49) | 0.76 (0.39, 1.47) |
| **Adjustedae** | 1.06 (0.66, 1.70) | 0.92 (0.50, 1.69) | 2.08 (1.29, 3.36) | 0.95 (0.61, 1.47) | 0.98 (0.67, 1.44) | 0.72 (0.38, 1.38) |

Abbreviation: *OR*, odds ratio; *CI*, confidence interval.

aThe assessments of *OR* and 95% *CI* for every 1.0 mg/L increment of urinary fluoride.

bUnadjusted covariates.

cAdjusted: urinary creatinine.

dAdjusted: BMI, age and gender.

eAdjusted: mother migrated and father migrated.