Supplementary table 1 Socio-demographic characteristics of different FT-LBW phenotypes compared with FT-NBW

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Characteristics a | Symmetric FT-LBW(N=163) | t/χ2 | *p*-Value | AsymmetricFT-LBW(N=80) | t/χ2 | *p*-Value |
| *Maternal age (years)* | 27.44±4.82 | 1.54 | 0.127 | 27.21±4.11 | 1.72 | 0.086 |
| *Ethnicity* |  | 2.40 | 0.121 |  | 1.18 | 0.277 |
| Han | 155(95.10) |  |  | 80(100.0) |  |  |
| Minority | 8(4.90) |  |  | 0(0.00) |  |  |
| *Marital status* |  | 1.18 | 0.278 |  | 0.70 | 0.546 |
| Married  | 162(99.40) |  |  | 78(97.50) |  |  |
| Unmarried | 1(0.60) |  |  | 2(2.50) |  |  |
| *Education* |  | 5.42 | 0.067 |  | 1.16 | 0.560 |
| Junior high or lower | 57(35.00) |  |  | 27(33.80) |  |  |
| senior high | 52(31.90) |  |  | 23(28.70) |  |  |
| college or higher | 54(33.10) |  |  | 30(37.50) |  |  |
| *Income (m-1p-1 ,CNY)* |  | 14.31 | 0.001 |  | 5.42 | 0.067 |
| <3000 | 102(62.58) |  |  | 36(45.00) |  |  |
| ≥3000 | 57(34.96) |  |  | 44(55.00) |  |  |
| unknown | 4(2.46) |  |  | 0(0.00) |  |  |
| *Parity* |  | 0.17 | 0.683 |  | 8.99 | 0.004 |
| Primiparity | 120(73.60) |  |  | 71(88.75) |  |  |
| Multiparity | 43(26.40) |  |  | 9(11.25) |  |  |
| *Pre-pregnancy BMI (kg/m2)* |  | 16.30 | <0.001 |  | 1.73 | 0.421 |
| Underweight (≤18.4) | 64(39.26) |  |  | 20(25.00) |  |  |
| Normal (18.4~23.9) | 87(53.37) |  |  | 57(71.25) |  |  |
| Overweight or obesity (>23.9） | 12(7.37) |  |  | 3(3.75) |  |  |
| *Prenatal exposure to ETS* |  | 36.09 | <0.001 |  | 2.10 | 0.146 |
| No | 69(42.30) |  |  | 47(58.80) |  |  |
| Yes | 94(57.70) |  |  | 33(41.20) |  |  |
| *Appetite (second or third trimester)* |  | 15.71 | <0.001 |  | 31.77 | <0.001 |
| Bad | 13(8.00) |  |  | 12(15.00) |  |  |
| Just so-so | 95(58.30) |  |  | 50(62.50) |  |  |
| Good | 55(33.70) |  |  | 18(22.50) |  |  |
| *Gestational weight gain (kg)* | 13.75±5.30 | 4.35 | <0.001 | 12.85±4.73 | 4.94 | <0.001 |
| *Infant gender* |  | 5.70 | 0.017 |  | 1.73 | 0.188 |
| Male | 69(42.30) |  |  | 36(45.00) |  |  |
| Female | 94(57.70) |  |  | 44(55.00) |  |  |
| *Gestational age (weeks)* | 37.73±1.00 | 16.31 | <0.001 | 38.30±0.80 | 8.51 | <0.001 |
| *Birth weight (g)* | 2337.45±158.19 | 54.48 | <0.001 | 2275.87±184.58 | 41.41 | <0.001 |
| *Body length(cm)* | 46.12±2.62 | 19.65 | <0.001 | 48.06±1.44 | 7.05 | <0.001 |
| *Ponderal index(g/cm3)* | 2.54±2.26 | 0.97 | 0.335 | 2.05±0.11 | 2.72 | 0.007 |

Supplementary table 2 Regression of prenatal exposure to ETS, appetite and different FT-LBW phenotypes

|  |  |  |
| --- | --- | --- |
|  |  | OR (95%CI) |
| Model 1a | Model 2b |
| FT-LBW(N=243) | *ETS exposure* |  |  |
| No | Ref. | Ref. |
| Yes | 1.83 (1.35, 2.48)\*\*\* | 1.73 (1.27, 2.36)\*\* |
| *Appetite* |  |  |
| Good | Ref. | Ref. |
| Just so-so | 2.21 (1.59, 3.07)\*\*\* | 2.15 (1.55, 2.99)\*\*\* |
| Bad | 4.07 (2.25, 7.35)\*\*\* | 3.79 (2.08, 6.88)\*\*\* |
| Symmetric FT-LBW(N=163) | *ETS exposure* |  |  |
| No | Ref. | Ref. |
| Yes | 2.26 (1.56, 3.26)\*\*\* | 2.16 (1.49, 3.13)\*\*\* |
| *Appetite* |  |  |
| Good | Ref. | Ref. |
| Just so-so | 1.76 (1.19, 2.59)\*\* | 1.68 (1.14, 2.48)\*\* |
| Bad | 2.85 (1.35, 6.01)\*\* | 2.54 (1.19, 5.41)\* |
| Asymmetric FT-LBW(N=80) | *ETS exposure* |  |  |
| No | Ref. | Ref. |
| Yes | 1.24 (0.77, 1,94) | 1.12 (0.69, 1.83) |
| *Appetite* |  |  |
| Good | Ref. | Ref. |
| Just so-so | 3.19 (1.82, 5.59)\*\*\* | 3.17 (1.81, 5.56)\*\*\* |
| Bad | 6.84 (3.03, 15.48)\*\*\* | 6.73 (2.96, 15.26)\*\*\* |

\*p-value<0.05; \*\* p-value<0.01;\*\*\* p-value<0.001

FT-LBW: full term low birth weight; ETS: environmental tobacco smoke

a：adjusted for maternal age, ethnicity, education, income, marital status, pre-pregnancy BMI, parity, gestational age and infant gender

b：adjusted for maternal age, ethnicity, education, income, marital status, pre-pregnancy BMI, parity, gestational age, infant gender and prenatal exposure to ETS /Appetitie

Supplementary table 3 Correlation of appetite during second and third trimesters, gestational weight gain, placental weight and different definitions of LBW

|  |  |  |
| --- | --- | --- |
|  | Partial correlation coefficient(pr a; standard error) | OR a(95%CI) |
| Appetite | GWG | PW | FT/SFT/AFT-LBW |
| FT-LBW | Appetite | 1 | 1.24(0.21)\*\*\* | 14.22(2.98)\*\*\* | 0.48 (0.37, 0.62)\*\*\* |
| GWG | - | 1 | 2.43(0.37)\*\*\* | 0.92 (0.89, 0.95)\*\*\* |
| PW | - | - | 1 | 0.98 (0.98, 0.99)\*\*\* |
| SFT-LBW | Appetite | 1 | 1.16(0.21)\*\*\* | 12.19(3.08)\*\*\* | 0.58 (0.43,0.78)\*\*\* |
| GWG | - | 1 | 2.57(0.40)\*\*\* | 0.94 (0.91,0.98)\*\*\* |
| PW | - | - | 1 | 0.99 (0.98,0.99)\*\*\* |
| AFT-LBW | Appetite | 1 | 1.16(0.22)\*\*\* | 12.31(3.20)\*\*\* | 0.37 (0.25,0.53)\*\*\* |
| GWG | - | 1 | 2.21(0.38)\*\*\* | 0.88 (0.83, 0.93)\*\*\* |
| PW | - | - | 1 | 0.98 (0.98, 0.99)\*\*\* |

\*\* p-value <0.01; \*\*\* p-value <0.001

FT-LBW: full term low birth weight; SFT-LBW: symmetric full term low birth weight; AFT-LBW: asymmetric full term low birth weight; GWG: gestational weight gain; PW: placental weight

a: adjusted for maternal age, ethnicity, education, income, marital status, pre-pregnancy BMI, parity, gestational age and infant gender.