

## Sensitivity analysis after excluding PTB and LBW

**Table S1.** Associations between maternal incense burning smoke exposure during pregnancy and children's obesity.

IBS exposure	AOR (95% CI) <sup>a</sup>
During pregnancy	
No	1.00
Yes	1.13 (1.03, 1.25) *

Model a: adjusted for child's gender and age, single child or not, parental age at conception, maternal marital status and pre-pregnancy BMI, family income, prenatal exposure to ETS, MCS, cooking oil fumes, child's feeding pattern, early nutritional status, folic acid intake during pregnancy.

AOR: adjusted OR. \*  $p < 0.05$ , \*\*  $p < 0.01$ .

**Table S2.** Associations between trimester-specific IBS exposure during pregnancy and children's obesity.

Trimester-specific IBS exposure	Total, N = 64,889	Obesity, n (%)	Excluding PTB and LBW AOR (95% CI) <sup>a</sup>
<b>1st trimester</b>			
No	59732	5933 (9.9)	1.00
Yes	5157	605 (11.7)	1.15 (1.04, 1.28) **
<b>2nd trimester</b>			
No	60243	5999 (10.0)	1.00
Yes	4646	539 (11.6)	1.15 (1.04, 1.28) **
<b>3rd trimester</b>			
No	60222	6019 (10.0)	1.00
Yes	4667	519 (11.1)	1.08 (0.96, 1.20)

Model a: adjusted for child's gender and age, single child or not, parental age at conception, maternal marital status and pre-pregnancy BMI, family income, prenatal exposure to ETS, MCS, cooking oil fumes, child's feeding pattern, early nutritional status, folic acid intake during pregnancy.

**Table S3.** Associations between frequency of trimester-specific IBS exposure during pregnancy and children's obesity.

Frequency of IBS exposure	Excluding PTB and LBW AOR (95% CI) <sup>a</sup>
<b>1st trimester</b>	
Never	1.00
1 time/week	1.13 (1.01, 1.26) *
≥2 time/week	1.35 (1.04, 1.73) *
<b>2nd trimester</b>	

Never	1.00
1 time/week	1.14 (1.02, 1.28) *
≥2 time/week	1.25 (0.93, 1.64)
3rd trimester	
Never	1.00
1 time/week	1.08 (0.96, 1.21)
≥2 time/week	1.08 (0.79, 1.43)

Model a: adjusted for child's gender and age, single child or not, parental age at conception, maternal marital status and pre-pregnancy BMI, family income, prenatal exposure to ETS, MCS, cooking oil fumes, child's feeding pattern, early nutritional status, folic acid intake during pregnancy.

**Table S4.** The associations between frequency of trimester-specific IBS exposure during pregnancy and children's obesity.

group	Trimester-specific exposure			AOR (95% CI) <sup>a</sup>
	1st trimester	2nd trimester	3rd trimester	
1	No	No	No	1.00
2	Yes	No	No	1.18 (0.94, 1.45)
3	No	Yes	No	1.28 (0.77, 2.00)
4	No	No	Yes	0.85 (0.56, 1.23)
5	Yes	Yes	No	1.61 (1.12, 2.25) **
6	Yes	No	Yes	0.77 (0.27, 1.75)
7	No	Yes	Yes	0.69 (0.24, 1.56)
8	Yes	Yes	Yes	1.13 (1.01, 1.27) *

Model a: adjusted for child's gender and age, single child or not, parental age at conception, maternal marital status and pre-pregnancy BMI, family income, prenatal exposure to ETS, MCS, cooking oil fumes, child's feeding pattern, early nutritional status, folic acid intake during pregnancy.

AOR: adjusted OR. \*  $p < 0.05$ , \*\*  $p < 0.01$ .

**Table S5.** Associations between frequency and duration of outdoor activity from 1 to 3 years of age on preschool obesity.

Outdoor activity	AOR (95% CI) <sup>a</sup>
Frequency during 1-3 years old (%)	
≥3times/week	1.00
<3 times/week	1.24 (1.17, 1.32) ***
Duration during 1-3 years old (%)	
≥60 min/time	1.00
<60 min/time	1.09 (1.03, 1.16) **
Overall outdoor factors	
≥ 3 times/week + ≥ 60 min/time	1.00
≥ 3 times/week + < 60 min/time	0.99 (0.91, 1.07)

< 3 times/week + ≥ 60 min/time	1.15 (1.06, 1.25) ***
< 3 times/week + < 60 min/time	1.33 (1.23, 1.45) ***

Model a: adjusted for child's gender and age, single child or not, parental age at conception, maternal marital status and pre-pregnancy BMI, family income, prenatal exposure to ETS, MCS, cooking oil fumes, child's feeding pattern, early nutritional status, folic acid intake during pregnancy.

AOR: adjusted OR. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

**Table S6.** Combination Effect between maternal IBS exposure during pregnancy and outdoor activity from 1 to 3 years of age on preschool obesity.

IBS exposure	Outdoor activity	Excluding PTB and LBW			
		AOR (95% CI) <sup>a</sup>	IOR (95% CI)	RERI (95% CI) <sup>a</sup>	AP (95% CI) <sup>a</sup>
Prenatal exposure	Frequency during 1-3 years old				
No	≥3times/week	1.00			
No	<3 times/week	1.20 (1.13, 1.29) ***			
Yes	≥3times/week	1.01 (0.88, 1.15)			
Yes	<3 times/week	1.49 (1.31, 1.70) ***	1.23 (1.02, 1.49) *	0.09 (0.04,0.15)	0.07 (0.03,0.10)
Prenatal exposure	Duration during 1-3 years old				
No	≥60 min/time	1.00			
No	<60 min/time	1.09 (1.02, 1.16) **			
Yes	≥60 min/time	1.13 (1.00, 1.27)			
Yes	<60 min/time	1.23 (1.06, 1.42) **	1.00 (0.83, 1.21)	0.07 (0.03,0.12)	0.06 (0.03,0.09)

Model a: adjusted for child's gender and age, single child or not, parental age at conception, maternal marital status and pre-pregnancy BMI, family income, prenatal exposure to ETS, MCS, cooking oil fumes, child's feeding pattern, early nutritional status, folic acid intake during pregnancy.

AOR: adjusted OR. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.