

Table 1. Demographic data of the study subjects (N=279)

Characteristics	Numbers (%)
Gender	
Male	152 (54.4)
Family history of atopic diseases	
None	207 (74.2)
Mother	37 (13.3)
Father	21 (7.5)
Siblings	7 (2.5)
Both parents	5 (1.8)
Both parents and siblings	2 (0.7)
Duration of exclusive breast feeding	
< 4 months	164 (58.8)
4-6 months	109 (39.0)
> 6 months	6 (2.2)
Mode of delivery	
Normal labor	165 (59.1)
Cesarean section	114 (40.9)
Household income category #	
Low income	131 (47.0)
Middle income	123 (44.1)
High income	25 (8.9)
Number of siblings	
0	164 (58.8)
1	86 (30.8)
2	29 (10.4)

According to Thai GDP 2016, low income defined as income < 11,500 USD/year, middle income 11,500 – 28,500 USD/year, high income > 28,500 USD/year

Table 2. Cox proportion hazards regression analysis factors associated with atopic dermatitis

Characteristics	HR (95%CI)	p-value	Adjust HR (95%CI)	p-value
High household income † Yes VS No	4.63 (1.04, 20.71)	0.045*	3.71 (1.31, 10.45) ‡	0.013*
Pet ownership Yes VS No	0.31 (0.13, 0.75)	0.009*	0.29 (0.12, 0.71) §	0.006*

Value are presented as Hazard ratio (HR), 95% Confident interval (95%CI).

P-value corresponds to Cox proportional hazards regression analysis, *P<0.05

† According to Thai GDP 2016, high income was defined as income above 28,500 USD/year

‡ Adjusted by history of atopic diseases in first-degree relative

§ Adjusted by history of atopic diseases in first-degree relative and food allergy status

Table 3. Cox proportion hazards regression analysis factors associated with food allergy

Characteristics	HR (95%CI)	p-value	Adjust HR † (95%CI)	p-value
Maternal history of atopic diseases Yes VS No	3.39 (1.34, 8.62)	0.010*	NA	NA
Early antibiotic used (before 6 months) Yes VS No	3.13 (1.30, 7.56)	0.011*	3.63 (1.49, 8.88)	0.005*
Duration of exclusive breast feeding < 4 months	0.22 (0.08, 0.61)	0.004*	0.22 (0.08, 0.60)	0.003*
4-6 months	2.97 (1.19, 7.46)	0.020*	2.92 (1.16, 7.39)	0.023*
> 6 months	7.03 (1.63, 30.33)	0.009*	16.01 (3.27, 78.38)	0.001*

Value are presented as Hazard ratio (HR), 95% Confident interval (95%CI).

P-value corresponds to Cox proportional hazards regression analysis, *P<0.05

† Adjusted by household income, history of atopic diseases in first-degree relative and atopic dermatitis status

Table 4. Logistic regression analysis factors associated with wheezing

Characteristics	HR (95%CI.)	p-value	Adjust HR (95%CI)	p-value
High household income † Yes VS No	5.50 (1.11, 27.37)	0.037*	6.98 (1.69, 28.79) ‡	0.007*
Shop house Yes VS No	0.31 (0.12, 0.83)	0.020*	0.30 (0.10, 0.91) §	0.033*
Timing of antibiotic used 19-24-month-old	2.61 (1.46, 4.66)	0.001*	2.79 (1.54, 5.04) ¶	0.001*
25-30-month-old	2.33 (1.31, 4.14)	0.004*	2.38 (1.33, 4.27) ¶	0.004*
Antibiotic frequency	1.50 (1.20, 1.87)	<0.001*	1.51 (1.21, 1.88) ††	<0.001*

Value are presented as Odds ratio (OR), 95% Confident interval (95%CI).

P-value corresponds to Logistic regression analysis, *P<0.05

† According to Thai GDP 2016, high income was defined as income above 28,500 USD/year

‡ Adjusted by history of atopic diseases in first-degree relative

§ Adjusted by household income, history of atopic diseases in first-degree relative, living near main street, pet ownership, presence of cockroaches at home, indoor cooking, aeroallergen sensitization

¶ Adjusted by household income, history of atopic diseases in first-degree relative and having chronic rhinitis

†† Adjusted by household income, history of atopic diseases in first-degree relative