grouped as 6 years or less, 7 to 9 years, and more than 9 years.

All questionnaires were read with an optical scanner, and results were entered into a Dbase file. Descriptive statistics, multiple logistic regression, and effect test were performed with the statistical package, JMP (version 3.02, SAS Institute). We calculated both the crude and adjusted odds ratios (ORs) using the method of unconditional logistic regression. The reduced model after multiple logistic regression was obtained by excluding the less important factor (greatest p value) stepwise until the p value of all included factors was less than 0.05. We also evaluated the interaction between inherent factors and environmental factors and created interaction variables into the reduced

model. A subsequent trend test was conducted to assess whether there was a linear increasing trend in the adjusted ORs as the exposure level increased using a method proposed by Rothman.[17]

RESULTS

There were 37,637 students aged from 12 to 14 years from 36 junior-high schools in this area including 19,206 (51.0%) males and 18,431 (49.0%) females. Except for 5 schools that declined to participate in this investigation, questionnaires were distributed randomly to 50% of selected classes from the 31 schools. A total of 13,764 students responded to this

Table 1. Prevalence of Allergic Rhinitis by Inherent Characteristics of Study Participants (11,475 persons)

Variable	n	No. of Cases	Prevalence (SE)
Next of kin ever having had allergic rhinitis			
Maternal grandfather			
No	11,358	1,088	9.6 (0.3)
Yes	117	41	35.0 (4.4)
Maternal grandmother			
No	11,379	1,092	9.6 (0.3)
Yes	96	37	38.5 (5.0)
Paternal grandfather			
No	11,341	1,078	9.5 (0.3)
Yes	134	51	38.1 (4.2)
Paternal grandmother			
No	11,332	1,069	9.4 (0.3)
Yes	143	60	42.0 (4.1)
Father			
No	10,830	870	8.0 (0.3)
Yes	645	259	40.2 (1.9)
Mother			
No	10,906	899	8.2 (0.3)
Yes	569	230	40.4 (2.1)
Brother or sister			
No	10,515	746	7.1 (0.3)
Yes	960	383	39.9 (1.6)
Gender			
Female	6,019	482	8.0 (0.4)
Male	5,456	647	12.0 (0.4)
Year in junior high school			
3	3,765	348	9.2 (0.5)
2	4,041	405	10.0 (0.5)
1	3,669	376	10.2 (0.5)