

Supplementary Material

Supplementary Tables

Table S1. Prevalence of asthma, allergic rhinitis, eczema, and associated symptoms in the study group (n = 202).

Symptoms	N (%)
1. Chronic respiratory diseases confirmed by a medical doctor	14 (6.93)
2. Allergic symptoms (skin itching, runny nose, watery eyes, etc?) for at least 3 days/nights lasting 3 months	85 (42.08)
3. Asthma	27 (13.40)
4. Poor lung function	5 (2.47)
5. Anaphylaxis/severe allergic reaction	5 (2.47)
During the previous 30 days	
6. Dermatographism	18 (8.91)
7. Urticaria	54 (26.73)
8. Atopic dermatitis	33 (16.33)
Asthma (during last 12 months)	
1. Wheezing or whistling in the chest at any time in the last 12 months	29 (14.35)
2. Frequency of wheezing attacks in the last 12 months	
1-3 times	11 (5.44)
4-12 times	7 (3.46)
More than 12	4 (1.98)
3. Frequency of wheezing attacks during sleeping in the last 12 months	
Never woken with wheezing	8 (3.96)
Less than one night per week	7 (3.46)
One or more nights per week	11 (5.44)
4. Diagnosed with asthma during the last 12 months?	24 (11.88)
5. Chest sounded wheezy during or after exercise	23 (11.38)
6. Dry cough at night not associated with a cold or chest infection	26 (12.87)
Allergic rhinitis (during last 12 months)	
1. Sneezing, runny or blocked nose not associated with cold or flu	176(87.12)
2. Nose problem accompanied by itchy-watery eyes	122(60.39)
3. Hay fever	152(75.24)
Eczema (during last 12 months)	
Confirmed Eczema	42 (20.79)
1. Itchy rash during the last 12 months	39 (19.30)
2. Has this itchy rash at any time affected any of the following places	
The folds of the elbows, behind the knees	8 (3.96)
In front of the ankles, under the buttocks	2 (0.99)
Around the neck, ears, or eyes	12 (5.94)
3. Has the rash cleared completely at any time during the last 12 months?	23 (11.86)
4. Frequency of itchy rash during sleeping in the last 12 months	
Never	16 (7.92)
Less than one night per week	11 (5.45)
One or more nights per week	12 (5.94)

Table S2. Lower triangle of correlation matrix: Symptom prevalence and pollen concentrations

		<i>Alternaria</i>	<i>Aspergillus/Penicillium</i>	<i>Cladosporium</i>	<i>Poaceae</i>	<i>Zea mays</i>	<i>Betula</i>	<i>Cupressaceae</i>	<i>Morus</i>	<i>Oleaceae</i>	<i>Platanus</i>	<i>Quercus</i>	<i>Ulmus</i>	<i>Amaranthus</i>	<i>Ambrosia</i>	<i>Artemisia</i>	<i>Plantaginaceae</i>	
<i>Aspergillus/Penicillium</i>	Correlation Coefficient	0.224																
	p-value	0.484																
<i>Cladosporium</i>	Correlation Coefficient	.958**	0.063															
	p-value	0.000	0.846															
<i>Poaceae</i>	Correlation Coefficient	.634*	0.214	0.543														
	p-value	0.027	0.505	0.068														
<i>Zea mays</i>	Correlation Coefficient	0.480	0.480	0.480	0.481													
	p-value	0.114	0.114	0.114	0.113													
<i>Betula</i>	Correlation Coefficient	-.828**	-.078	-.836**	-.677*	-.244												
	p-value	0.001	0.809	0.001	0.016	0.445												
<i>Cupressaceae</i>	Correlation Coefficient	-0.035	.662*	-0.158	-0.105	0.131	0.104											
	p-value	0.914	0.019	0.625	0.745	0.684	0.748											
<i>Morus</i>	Correlation Coefficient	-0.323	0.505	-0.316	-0.142	0.318	0.455	0.473										
	p-value	0.305	0.094	0.317	0.660	0.314	0.138	0.120										
<i>Oleaceae</i>	Correlation Coefficient	-0.320	-0.343	-0.312	0.187	-0.243	0.196	-0.410	-0.024									
	p-value	0.311	0.275	0.324	0.560	0.446	0.541	0.185	0.940									
<i>Platanus</i>	Correlation Coefficient	-0.530	0.164	-0.546	-0.516	-0.243	.749**	0.355	.713**	0.157								
	p-value	0.076	0.611	0.066	0.086	0.446	0.005	0.257	0.009	0.627								
<i>Quercus</i>	Correlation Coefficient	0.285	0.250	0.278	0.034	0.312	0.008	0.355	-.598*	-0.243	0.410							
	p-value	0.369	0.434	0.381	0.917	0.324	0.980	0.257	0.040	0.448	0.186							
<i>Ulmus</i>	Correlation Coefficient	0.274	-0.168	0.262	0.476	0.439	-0.341	-0.086	-0.380	0.044	-.654*	-0.165						
	p-value	0.390	0.602	0.411	0.118	0.153	0.279	0.790	0.224	0.893	0.021	0.608						
<i>Amaranthus</i>	Correlation Coefficient	.611**	0.339	0.497	.889**	0.402	-.743**	0.100	-0.119	-0.072	-.598*	0.126	0.457					
	p-value	0.035	0.281	0.101	0.000	0.196	0.006	0.757	0.713	0.825	0.040	0.697	0.135					
<i>Ambrosia</i>	Correlation Coefficient	.811**	-.016	.795**	0.453	0.438	-.654*	-0.148	-0.421	-0.374	-.652*	0.235	0.349	0.518				
	p-value	0.001	0.962	0.002	0.139	0.154	0.021	0.645	0.173	0.231	0.022	0.463	0.267	0.085				
<i>Artemisia</i>	Correlation Coefficient	0.532	0.193	0.477	0.414	.631*	-0.231	-0.060	-0.124	0.194	-0.256	0.136	0.410	0.220	0.532			
	p-value	0.075	0.548	0.117	0.181	0.028	0.470	0.854	0.701	0.545	0.422	0.674	0.185	0.491	0.075			
<i>Plantaginaceae</i>	Correlation Coefficient	0.085	-0.014	0.046	.696*	0.221	-0.150	-0.352	0.160	.729**	-0.063	0.041	0.156	0.478	0.000	0.325		
	p-value	0.793	0.965	0.887	0.012	0.491	0.642	0.261	0.620	0.007	0.846	0.898	0.628	0.116	1.000	0.303		
<i>Symptoms</i>	Correlation Coefficient	-0.330	-0.060	-0.305	-0.531	-0.044	.714**	0.102	0.505	0.211	.814**	0.496	-0.423	-.678*	-0.286	0.166	-0.066	
	p-value	0.295	0.854	0.335	0.076	0.892	0.009	0.753	0.094	0.510	0.001	0.101	0.170	0.015	0.368	0.607	0.839	
**		Correlation is significant at the 0.01 level (2-tailed).																
*		Correlation is significant at the 0.05 level (2-tailed).																

Table S3. Pearson’s Chi-Square tests: Association between allergens and gender and ethnicity

Allergen	Gender				Ethnicity				
	$\chi^2(1)$	<i>p</i>	% F	% M	$\chi^2(1)$	<i>p</i>	% AF	% W	% Other
<i>Aspergillus</i>	0.13	1	3.00%	2.00%	0.37	0.831	3.00%	3.00%	0.00%
<i>Penicillium</i>	0.751	1	1.50%	0.00%	3.463	0.177	0.00%	3.00%	0.00%
<i>Alternaria</i>	1.86	0.209	17.40%	26.50%	1.843	0.398	18.80%	24.20%	8.30%
<i>Cladosporium</i>	0.123	0.663	3.00%	4.10%	2.498	0.287	2.00%	6.10%	0.00%
Bermuda grass	0.13	0.739	43.90%	46.90%	2.295	0.317	49.50%	37.90%	50.00%
Ryegrass	0.062	0.844	22.70%	24.50%	5.051	0.08*	21.80%	21.20%	50.00%
6 Grass mix	0.95	0.36	27.30%	34.70%	5.259	0.072*	28.70%	25.80%	58.30%
<i>Platanus</i>	8.471	0.005**	13.60%	32.70%	6.336	0.042**	13.90%	22.70%	41.70%
<i>Cypress</i>	0.896	0.463	4.50%	8.20%	6.82	0.033**	2.00%	9.10%	16.70%
<i>Quercus</i>	0.642	0.404	8.30%	12.20%	2.108	0.348	6.90%	13.60%	8.30%
<i>Morus</i>	2.998	0.115	9.10%	18.40%	1.804	0.406	8.90%	15.20%	16.70%
Ambrosia	0.218	0.597	9.80%	12.20%	1.871	0.392	7.90%	13.60%	16.70%
<i>Zea maize</i>	0.1	0.847	24.20%	26.50%	4.063	0.131	29.70%	16.70%	33.30%
<i>Ulmus</i>	1.05	0.38	15.90%	22.40%	1.544	0.462	14.90%	21.20%	25.00%
<i>Olea</i>	4.933	0.046**	9.80%	22.40%	3.231	0.199	8.90%	18.20%	16.70%
<i>Betula</i>	5.086	0.046**	4.50%	14.30%	1.847	0.397	5.90%	7.60%	16.70%
Weed mix	1.903	0.186	9.10%	16.30%	1.289	0.525	8.90%	13.60%	16.70%

****** : significant at $\alpha = 0.05$
***** : significant at $\alpha = 0.1$
 % F: percentage of female participants who had a significant SPT reaction to the allergen
 % M: percentage of male participants who had a significant SPT reaction to the allergen
 % AF: percentage of African participants who had a significant SPT reaction to the allergen
 % W: percentage of White participants who had a significant SPT reaction to the allergen
 % Other: percentage of Other participants who had a significant SPT reaction to the allergen

Note: It is important to acknowledge that the number and distribution of participants across the Gender and Ethnicity demographic groups may not be adequate for generalizing the findings to the broader study population.