

Table 1. Baseline characteristics of participants stratified by exposure to pets

Characteristics	All participants (N=4082)		Participants with pets ownership (N=1776)		Participants without pets ownership (N=2306)		P-value
	N	%	N	%	N	%	
Gender							
Male	1954	47.9	834	47.0	1120	48.6	0.308
Female	2128	52.1	942	53.0	1186	51.4	
Age (years)							
<30	863	21.1	365	20.6	498	21.6	0.417
≥30	3219	78.9	1411	79.4	1808	78.4	
Race							
Mexican-American	813	19.9	255	14.4	558	24.2	0.711
Other Hispanics	125	3.1	45	2.5	80	3.5	
Non-hispanic white	2070	50.7	1198	67.5	873	37.9	
Non-hispanic blacks	914	22.4	214	12.0	700	30.4	
Other races	159	3.9	64	3.6	95	4.1	
Marital status							
Singlehood	1470	36.0	591	33.3	879	38.1	0.001
Get married	2612	64.0	1185	66.7	1427	61.9	
PIR							
PIR>1	3365	82.4	1575	88.7	1790	77.6	<0.001
PIR≤1	717	17.6	201	11.3	516	22.4	
Education							
Below high school	1099	26.9	334	18.8	765	33.2	<0.001
High school graduation	964	23.6	445	25.1	519	22.5	
Above high school	2019	49.5	997	56.1	1022	44.3	
Smoking status							
Never	2149	52.6	824	46.4	1325	57.5	<0.001
Past	1035	25.4	510	28.7	525	22.8	
Current	898	22.0	442	24.9	456	19.8	
BMI							
Underweight	66	1.6	26	1.5	40	1.7	0.801
Normal weight	876	21.5	397	22.4	479	20.8	
Overweight	1188	29.1	500	28.2	688	29.8	
Obesity	1952	47.8	853	48.0	1099	47.7	
Diabetes							
No	3675	90.0	1612	90.8	2063	89.5	0.168
Yes	407	10.0	164	9.2	243	10.5	
Hypertension							
No	2803	68.7	1239	69.8	1564	67.8	0.185
Yes	1279	31.3	537	30.2	742	32.2	

Weight divided by height square (kg/m²) is BMI, <18.5 kg/m² is underweight, 18.5 kg/m² to 23.9 kg/m² is normal weight, 24.0 to 27.9 kg/m² is overweight, and ≥ 28 kg/m² is obese

Smoking is classified as current smokers, never smokers (smokers <100 cigarettes) or past smokers (not current smokers, but have smoked ≥100 cigarettes).

Table 2. Differences in the incidence of allergic diseases in the study population

	All participants		Participants with pets ownership		Participants without pets ownership		P-value
	N	%	N	%	N	%	
Hay fever	426	10.4	231	13.0	195	8.5	<0.001*
Allergic rhinitis	1316	32.2	647	36.4	669	29.0	<0.001*
Asthma	528	12.9	263	14.8	265	11.5	0.002*
Eczema	269	6.6	142	8.0	127	5.5	0.001*

*:p <0.05

Table 3. Adjusted odds ratios of pet exposure to allergic disease

	Single factor		Model1		Model2	
	OR	95 % CI	OR	95 % CI	OR	95 % CI
Hay fever						
Participants without pets ownership (Reference)	1		1		1	
Cat-only	1.832	[1.358, 2.471]*	1.503	[1.103, 2.047]*	1.419	[1.037,1.942]*
Dog-only	1.500	[1.179, 1.908]*	1.304	[1.017, 1.672]*	1.264	[0.982,1.627]
Cat and dog	1.686	[1.192, 2.384]*	1.303	[0.910, 1.865]	1.270	[0.883,1.826]
Allergic rhinitis						
Participants without pets ownership (Reference)	1		1		1	
Cat-only	1.625	[1.320, 2.001]*	1.380	[1.113, 1.710]*	1.300	[1.046,1.616]*
Dog-only	1.323	[1.129, 1.550]*	1.184	[1.005, 1.394]*	1.141	[0.966,1.347]
Cat and dog	1.354	[1.064, 1.724]*	1.092	[0.851, 1.402]	1.040	[0.808,1.339]
Asthma						
Participants without pets ownership (Reference)	1		1		1	
Cat-only	1.212	[0.901, 1.631]	1.142	[0.841,1.551]	1.018	[0.814,1.509]
Dog-only	1.371	[1.104, 1.702]*	1.363	[1.089,1.705]*	1.361	[1.085,1.707]*
Cat and dog	1.420	[1.029, 1.960]*	1.351	[0.966,1.890]	1.342	[0.956,1.886]
Eczema						
Participants without pets ownership (Reference)	1		1		1	
Cat-only	1.650	[1.139, 2.390]*	1.350	[0.921,1.981]	1.296	[0.881,1.907]
Dog-only	1.598	[1.200, 2.128]*	1.433	[1.065,1.928]*	1.402	[1.039,1.891]*
Cat and dog	0.977	[0.588, 1.624]	0.772	[0.458,1.300]	0.742	[0.439,1.254]

*:p <0.05

Table 4 .Differences in inflammation index among study groups

		All participants		Participants with pets ownership		Participants without pets ownership		P-value
		Mean	SD	Mean	SD	Mean	SD	
Number of eosinophils (1000 cells /uL)		0.21	0.18	0.21	0.17	0.21	0.19	0.521
IgE (kU/L)		159.94	460.35	135.60	519.80	178.69	401.90	0.003*
CRP(mg/dl)		0.48	0.84	0.47	0.88	0.49	0.81	0.429
NLR		2.26	1.22	2.30	1.13	2.23	1.28	0.045*
PLR		141.06	53.84	140.11	50.38	141.80	56.37	0.319
LCR		21.80	36.88	20.94	33.44	22.46	39.32	0.193
SII		625.42	381.89	638.18	353.92	615.60	401.90	0.057

*:p <0.05

Table 5. Univariate analysis of pet exposure and all-cause mortality

Characteristics	HR	95%CI	P-value
Gender			
Male	Reference		
Female	0.693	0.600,0.802	<0.001*
Age (years)			
<30	Reference		
≥30	27.675	13.787,55.550	<0.001*
Race			
Mexican-American	Reference		
Other Hispanics	0.374	0.137,1.026	0.056
Non-hispanic white	3.067	2.384,3.946	<0.001*
Non-hispanic blacks	2.183	1.647,2.895	<0.001*
Other races	0.806	0.426,1.522	0.506
Marital status			
Singlehood	Reference		
Get married	0.556	0.481,0.642	<0.001*
PIR			
PIR ≤ 1	Reference		
PIR > 1	0.980	0.812,1.184	0.837
Education			
Below high school	Reference		
High school graduation	0.819	0.683,0.982	0.031*
Above high school	0.487	0.411,0.577	<0.001*
Smoking status			
Never	Reference		
Past	2.240	1.904,2.637	<0.001*
Current	1.341	1.105,1.626	0.003*
BMI			
Underweight	Reference		
Normoweight	0.746	0.446,1.245	0.262
Overweight	0.701	0.422,1.165	0.171
Obesity	0.666	0.404,1.100	0.112
Diabetes			
No	Reference		
Yes	2.942	2.469,3.506	<0.001*
Hypertension			
No	Reference		
Yes	3.247	2.807,3.756	<0.001*
Pet exposure			
Participants without pets ownership	Reference		
Cat-only	0.707	0.545,0.917	0.009*
Dog-only	0.947	0.797,1.124	0.531
Cat and dog	0.620	0.452,0.850	0.003*

*:p <0.05

Table 6 .Relationship between model-adjusted pet exposure and all-cause mortality

Proportional hazard Cox models		Model1		Model2		Model3	
		HR	95 % CI	HR	95 % CI	HR	95 % CI
Participants without pets ownership	(Reference)	1		1		1	
Cat-only		0.556	[0.427,0.724]*	0.610	[0.469,0.794]*	0.615	[0.472,0.801]*
Dog-only		0.821	[0.689,0.979]*	0.933	[0.783,1.113]	0.930	[0.779,1.110]
Cat and dog		0.468	[0.340,0.645]*	0.530	[0.384,0.731]*	0.575	[0.416,0.794]*

*:p <0.05

Table 7. Association of model-adjusted pets with all-cause mortality, grouped by gender

Gender		Model1		Model2		Model3	
		HR	95 % CI	HR	95 % CI	HR	95 % CI
Male							
Participants	without	1		1		1	
pets ownership							
(Reference)							
Cat-only		0.652	[0.470,0.904]*	0.695	[0.501,0.965]*	0.698	[0.502,0.970]*
Dog-only		0.786	[0.617,1.001]	0.855	[0.671,1.091]	0.836	[0.654,1.067]
Cat and dog		0.416	[0.265,0.653]*	0.441	[0.280,0.692]*	0.491	[0.312,0.774]*
Female							
Participants	without	1		1		1	
pets ownership							
(Reference)							
Cat-only		0.428	[0.274,0.670]*	0.509	[0.325,0.797]*	0.523	[0.333,0.822]*
Dog-only		0.858	[0.664,1.109]	1.074	[0.829,1.390]	1.109	[0.855,1.439]
Cat and dog		0.528	[0.334,0.835]*	0.634	[0.400,1.005]	0.672	[0.423,1.068]

*:P <0.05