

Table S1. Survey participant characteristics by type of companion animal.

	Dog guardians (n =661)	Cat guardians (n =469)	Fish guardians (n =218)	Other companion animal guardians (n =226)	All companion animal guardians (n =1005)	Non-companion animal guardians (n =154)	Total (n =1159)
Age							
18-34	214 (32%)	172 (37%)	98 (45%)	105 (46%)	364 (36%)	74 (48%)	438 (38%)
35-50	241 (36%)	169 (36%)	77 (35%)	75 (33%)	353 (35%)	41 (27%)	394 (34%)
51-69	185 (28%)	112 (24%)	39 (18%)	43 (19%)	254 (25%)	27 (18%)	281 (24%)
70+	20 (3%)	16 (3%)	3 (1%)	3 (1%)	32 (3%)	12 (8%)	44 (4%)
Prefer not to say	1 (<1%)	0	1 (<1%)	0	2 (<1%)	0	2 (<1%)
Gender							
Female	554 (84%)	404 (86%)	157 (72%)	196 (87%)	839 (83%)	111 (72%)	950 (82%)
Male	102 (15%)	57 (12%)	59 (27%)	28 (12%)	154 (15%)	41 (27%)	195 (17%)
Other	2 (<1%)	3 (1%)	0	1 (<1%)	4 (<1%)	2 (1%)	6 (1%)
Prefer not to say	3 (<1%)	5 (1%)	2 (1%)	1 (<1%)	8 (1%)	0	8 (1%)
Ethnicity							
White	604 (91%)	429 (91%)	205 (94%)	219 (97%)	920 (92%)	141 (92%)	1061 (92%)
Asian	11 (2%)	10 (2%)	4 (2%)	2 (1%)	18 (2%)	5 (3%)	23 (2%)
Black or African American	4 (1%)	3 (1%)	0	1 (<1%)	5 (<1%)	1 (1%)	6 (1%)
Hispanic or Latino	24 (4%)	15 (3%)	0	0	32 (3%)	3 (2%)	35 (3%)
Two or more	8 (1%)	4 (1%)	3 (1%)	2 (1%)	12 (1%)	1 (1%)	13 (1%)
Prefer not to say/unclear	10 (2%)	8 (2%)	6 (3%)	2 (1%)	18 (2%)	3 (2%)	21 (2%)
Education							
High school or below	91 (14%)	64 (14%)	42 (19%)	43 (19%)	135 (13%)	15 (10%)	150 (13%)
Undergraduate	269 (41%)	198 (42%)	100 (46%)	99 (44%)	415 (41%)	47 (31%)	462 (40%)
Masters	183 (28%)	127 (27%)	49 (22%)	42 (19%)	270 (27%)	57 (37%)	327 (28%)
Doctorate	111 (17%)	75 (16%)	21 (10%)	38 (17%)	172 (17%)	35 (23%)	207 (18%)
Prefer not to say/don't know	7 (1%)	5 (1%)	6 (3%)	4 (2%)	13 (1%)	0	13 (1%)
Marital							
Married/living with partner	426 (64%)	276 (59%)	145 (67%)	137 (61%)	620 (62%)	77 (50%)	697 (60%)
Partner, not living together	26 (4%)	30 (6%)	20 (9%)	16 (7%)	57 (6%)	14 (9%)	71 (6%)
Single, separated, divorced or widowed	206 (31%)	156 (33%)	51 (23%)	72 (32%)	320 (32%)	61 (40%)	381 (33%)
Prefer not to say/unclear	3 (<1%)	7 (1%)	2 (1%)	1 (<1%)	8 (1%)	2 (1%)	10 (1%)
Live with children							
Yes	175 (26%)	125 (27%)	80 (37%)	72 (32%)	244 (24%)	38 (25%)	282 (24%)
No	486 (74%)	344 (73%)	138 (63%)	154 (68%)	761 (76%)	116 (75%)	877 (76%)
Country							
United Kingdom	277 (42%)	216 (46%)	139 (64%)	139 (62%)	473 (47%)	113 (73%)	586 (51%)

United States	244 (37%)	174 (37%)	52 (24%)	60 (27%)	351 (35%)	24 (16%)	375 (32%)
Other	139 (21%)	78 (17%)	27 (12%)	27 (12%)	179 (18%)	16 (10%)	195 (17%)
Prefer not to say	1 (<1%)	1 (<1%)	0	0	2 (<1%)	1 (1%)	3 (<1%)
Frequency of written communication							
Less than an average amount	261 (39%)	185 (39%)	81 (37%)	92 (41%)	390 (39%)	64 (42%)	454 (39%)
An average amount	400 (61%)	284 (61%)	137 (63%)	134 (59%)	615 (61%)	90 (58%)	705 (61%)
Frequency of verbal communication							
Less than an average amount	204 (31%)	148 (32%)	69 (32%)	78 (35%)	305 (30%)	31 (20%)	336 (29%)
An average amount	249 (38%)	198 (42%)	92 (42%)	91 (40%)	404 (40%)	61 (40%)	465 (40%)
More than an average amount	208 (31%)	123 (26%)	57 (26%)	57 (25%)	296 (29%)	62 (40%)	358 (31%)
Frequency of face-to-face communication							
Less than an average amount	214 (32%)	161 (34%)	76 (35%)	65 (29%)	330 (33%)	48 (31%)	378 (33%)
An average amount	163 (25%)	119 (25%)	51 (23%)	58 (26%)	258 (26%)	38 (25%)	296 (26%)
More than an average amount	284 (43%)	188 (40%)	91 (42%)	103 (46%)	416 (41%)	67 (44%)	483 (42%)
Prefer not to say	0	1 (<1%)	0	0	1 (<1%)	1 (1%)	2 (<1%)
Frequency of exercise outside the home							
Less than an average amount	195 (30%)	171 (36%)	77 (35%)	67 (30%)	323 (32%)	44 (29%)	367 (32%)
An average amount	119 (18%)	121 (26%)	57 (26%)	53 (23%)	233 (23%)	50 (32%)	283 (24%)
More than an average amount	345 (52%)	175 (37%)	84 (39%)	106 (47%)	445 (44%)	60 (39%)	505 (44%)
Prefer not to say	2 (<1%)	2 (<1%)	0	0	4 (<1%)	0	4 (<1%)
Frequency of essential errands							
Less than an average amount	190 (29%)	139 (30%)	63 (29%)	66 (29%)	291 (29%)	41 (27%)	332 (29%)
An average amount	260 (39%)	188 (40%)	72 (33%)	81 (36%)	387 (39%)	69 (45%)	456 (39%)
More than an average amount	211 (32%)	142 (30%)	83 (38%)	79 (35%)	327 (33%)	44 (29%)	371 (32%)
Working							
Yes	494 (75%)	356 (76%)	147 (67%)	167 (74%)	756 (75%)	122 (79%)	878 (76%)
No	163 (25%)	110 (23%)	69 (32%)	58 (26%)	241 (24%)	32 (21%)	273 (24%)
Prefer not to say	4 (1%)	3 (1%)	2 (1%)	1 (<1%)	8 (1%)	0	8 (1%)
Period of isolation greater than 1 week							
Yes	189 (29%)	149 (32%)	72 (33%)	64 (28%)	305 (30%)	31 (20%)	336 (29%)
No	471 (71%)	319 (68%)	145 (67%)	161 (71%)	697 (69%)	123 (80%)	820 (71%)
Prefer not to say	1 (<1%)	1 (<1%)	1 (<1%)	1 (<1%)	3 (<1%)	0	3 (<1%)

Note: ‘Other’ genders were recorded as missing data for analyses; examples of unclear responses include “human being” and “English” for ethnicity, and “boyfriend” and “engaged” for marital status.

Table S2. Results of robust hierarchical multiple regression analyses.

	Mental well-being (n = 1031)				UCLA Loneliness Scale (n = 1074)				Depression (n = 1046)			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Step 1	$R^2 = 0.072$ $\chi^2(12) = 74.94, p < 0.001$				$R^2 = 0.129$ $\chi^2(12) = 150.85, p < 0.001$				$R^2 = 0.098$ $\chi^2(12) = 114.2, p < 0.001$			
Intercept	39.28	1.06	37.05	<0.001	6.23	0.19	33.53	<0.001	14.56	0.84	17.30	<0.001
Age (0=18-34 years)												
35-50 years	1.53	0.75	2.04	0.042	-0.49	0.13	-3.66	<0.001	-2.23	0.60	-3.70	<0.001
51-69 years	3.08	0.81	3.80	<0.001	-0.47	0.15	-3.19	0.001	-2.95	0.66	-4.50	<0.001
70+ years	6.69	1.63	4.12	<0.001	-0.83	0.29	-2.86	0.004	-4.46	1.29	-3.46	0.001
Gender (0=Female)												
Male	1.44	0.81	1.79	0.074	-0.22	0.14	-1.56	0.119	-1.30	0.65	-2.00	0.046
Highest level of education (0=School or below)												
Undergraduate	2.35	0.99	2.38	0.017	-0.19	0.17	-1.10	0.272	-1.24	0.78	-1.58	0.114
Masters	2.59	1.03	2.51	0.012	-0.01	0.18	-0.08	0.939	-1.43	0.82	-1.74	0.082
Doctorate	3.01	1.12	2.70	0.007	-0.18	0.20	-0.91	0.362	-2.10	0.89	-2.36	0.019
Marital status (0=Single, separated, divorced, widowed)												
Partnered, not living together	2.46	1.31	1.88	0.060	-0.68	0.24	-2.85	0.004	0.51	1.06	0.48	0.634
Married or living with partner	2.76	0.67	4.11	<0.001	-1.18	0.12	-9.81	<0.001	-1.84	0.54	-3.38	0.001
Live with children (0=No)												
Yes	1.22	0.76	1.60	0.110	-0.13	0.14	-0.99	0.320	-1.90	0.61	-3.10	0.002
Country (0=United Kingdom)												
United States	0.93	0.71	1.31	0.192	<0.01	0.13	-0.04	0.969	-1.88	0.57	-3.30	0.001
Other	2.15	0.86	2.49	0.013	-0.09	0.15	-0.56	0.576	-2.40	0.69	-3.46	0.001
	Mental well-being (n = 1031)				UCLA Loneliness Scale (n = 1074)				Depression (n = 1046)			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Step 2	$\Delta R^2 = 0.034$ $\chi^2(8) = 37.54, p < 0.001$				$\Delta R^2 = 0.036$ $\chi^2(8) = 42.54, p < 0.001$				$\Delta R^2 = 0.031$ $\chi^2(8) = 37.42, p < 0.001$			
Intercept	37.89	1.44	26.24	<0.001	6.42	0.26	25.14	<0.001	16.50	1.17	14.14	<0.001
Age (0=18-34 years)												
35-50 years	1.04	0.75	1.40	0.163	-0.42	0.13	-3.17	0.002	-1.88	0.61	-3.11	0.002
51-69 years	3.06	0.81	3.75	<0.001	-0.42	0.15	-2.87	0.004	-2.93	0.66	-4.42	<0.001
70+ years	7.58	1.71	4.44	<0.001	-0.85	0.30	-2.80	0.005	-5.66	1.37	-4.15	<0.001
Gender (0=Female)												
Male	1.18	0.80	1.48	0.140	-0.22	0.14	-1.57	0.118	-1.10	0.65	-1.70	0.089
Highest level of education (0=School or below)												

Undergraduate	1.76	0.98	1.80	0.073	-0.17	0.17	-0.97	0.334	-0.82	0.78	-1.05	0.293
Masters	2.07	1.03	2.01	0.045	<0.01	0.18	0.02	0.981	-1.05	0.83	-1.26	0.208
Doctorate	2.08	1.13	1.83	0.067	-0.14	0.20	-0.70	0.487	-1.39	0.91	-1.53	0.128
Marital status (0=Single, separated, divorced, widowed)												
Partnered, not living together	2.50	1.30	1.93	0.054	-0.60	0.24	-2.56	0.011	0.64	1.06	0.61	0.544
Married or living with partner	2.72	0.67	4.06	<0.001	-1.17	0.12	-9.77	<0.001	-1.72	0.55	-3.14	0.002
Live with children (0=No)												
Yes	1.18	0.75	1.57	0.116	-0.11	0.13	-0.84	0.404	-1.88	0.61	-3.08	0.002
Country (0=United Kingdom)												
United States	1.43	0.73	1.97	0.049	-0.11	0.13	-0.83	0.407	-2.38	0.59	-4.02	<0.001
Other	2.36	0.87	2.71	0.007	-0.20	0.15	-1.27	0.203	-2.63	0.71	-3.71	<0.001
Communicated via verbal means (0=Average)												
Less than average	-1.80	0.73	-2.45	0.014	0.17	0.13	1.30	0.195	0.97	0.59	1.63	0.104
More than average	-0.14	0.71	-0.19	0.847	0.15	0.13	1.14	0.254	0.13	0.58	0.22	0.824
Communicated face-to-face (0=Average)												
Less than average	-0.85	0.78	-1.09	0.275	0.08	0.14	0.59	0.553	-0.07	0.64	-0.11	0.910
More than average	0.42	0.75	0.56	0.574	-0.29	0.14	-2.15	0.032	-0.62	0.62	-1.01	0.312
Left the house to exercise (0=Average)												
Less than average	0.33	0.82	0.41	0.685	-0.28	0.15	-1.90	0.058	-0.32	0.67	-0.47	0.637
More than average	2.64	0.74	3.57	<0.001	-0.39	0.13	-2.94	0.003	-2.26	0.60	-3.76	<0.001
Working during pandemic (0=No)												
Yes	1.91	0.79	2.42	0.016	-0.11	0.14	-0.79	0.432	-1.87	0.64	-2.92	0.004
Period of isolation >1 week (0=No)												
Yes	-0.53	0.68	-0.79	0.431	0.49	0.12	4.08	<0.001	0.93	0.55	1.68	0.093
	Mental well-being (n = 1031)				UCLA Loneliness Scale (n = 1074)				Depression (n = 1046)			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Step 3	$\Delta R^2 = 0.008$ $\chi^2(5) = 8.52, p = 0.130$				$\Delta R^2 = 0.001$ $\chi^2(5) = 1.40, p = 0.925$				$\Delta R^2 = 0.008$ $\chi^2(5) = 8.29, p = 0.141$			
Intercept	38.82	1.63	23.77	<0.001	6.43	0.29	22.28	<0.001	15.59	1.32	11.83	<0.001
Age (0=18-34 years)												
35-50 years	1.09	0.75	1.45	0.148	-0.42	0.13	-3.10	0.002	-1.94	0.61	-3.19	0.001
51-69 years	3.15	0.82	3.83	<0.001	-0.40	0.15	-2.74	0.006	-3.03	0.67	-4.54	<0.001
70+ years	7.30	1.73	4.23	<0.001	-0.84	0.31	-2.74	0.006	-5.34	1.38	-3.88	<0.001
Gender (0=Female)												
Male	0.90	0.82	1.10	0.273	-0.24	0.15	-1.67	0.095	-0.91	0.66	-1.37	0.171
Highest level of education (0=School or below)												
Undergraduate	1.71	0.98	1.74	0.082	-0.17	0.17	-0.96	0.337	-0.67	0.79	-0.85	0.395
Masters	1.95	1.04	1.87	0.062	0.01	0.18	0.05	0.959	-0.81	0.84	-0.97	0.334
Doctorate	2.02	1.15	1.77	0.078	-0.13	0.20	-0.66	0.508	-1.14	0.92	-1.24	0.217

Marital status (0=Single, separated, divorced, widowed)												
Partnered, not living together	2.22	1.30	1.70	0.089	-0.62	0.24	-2.63	0.009	0.77	1.06	0.73	0.467
Married or living with partner	2.84	0.68	4.21	<0.001	-1.16	0.12	-9.62	<0.001	-1.84	0.55	-3.34	0.001
Live with children (0=No)												
Yes	1.13	0.77	1.46	0.144	-0.13	0.14	-0.94	0.349	-2.03	0.62	-3.26	0.001
Country (0=United Kingdom)												
United States	1.88	0.75	2.50	0.013	-0.08	0.13	-0.60	0.547	-2.72	0.61	-4.47	<0.001
Other	2.89	0.90	3.22	0.001	-0.16	0.16	-0.99	0.325	-3.01	0.73	-4.13	<0.001
Communicated via verbal means (0=Average)												
Less than average	-1.62	0.74	-2.20	0.028	0.18	0.13	1.35	0.177	0.86	0.60	1.45	0.148
More than average	-0.09	0.72	-0.13	0.897	0.16	0.13	1.21	0.227	0.18	0.58	0.31	0.759
Communicated face-to-face (0=Average)												
Less than average	-0.91	0.78	-1.17	0.244	0.08	0.14	0.56	0.578	-0.06	0.64	-0.10	0.920
More than average	0.46	0.76	0.61	0.544	-0.29	0.14	-2.15	0.031	-0.71	0.62	-1.15	0.249
Left the house to exercise (0=Average)												
Less than average	0.39	0.82	0.47	0.639	-0.28	0.15	-1.88	0.060	-0.43	0.67	-0.64	0.525
More than average	3.10	0.76	4.06	<0.001	-0.36	0.14	-2.66	0.008	-2.60	0.62	-4.21	<0.001
Working during pandemic (0=No)												
Yes	1.90	0.79	2.40	0.017	-0.10	0.14	-0.72	0.474	-1.82	0.64	-2.83	0.005
Period of isolation >1 week (0=No)												
Yes	-0.57	0.68	-0.84	0.402	0.49	0.12	4.02	<0.001	0.95	0.55	1.72	0.087
Companion animal guardian (0=No)												
Yes	-1.20	1.19	-1.01	0.315	-0.06	0.21	-0.29	0.771	0.07	0.97	0.07	0.944
Dog guardian (0=No)												
Yes	-1.08	0.80	-1.35	0.179	-0.07	0.14	-0.47	0.640	1.38	0.65	2.13	0.034
Cat guardian (0=No)												
Yes	0.44	0.73	0.60	0.549	0.02	0.13	0.19	0.852	0.55	0.59	0.93	0.355
Fish guardian (0=No)												
Yes	1.03	0.82	1.25	0.212	0.12	0.15	0.79	0.432	0.13	0.66	0.20	0.842
Other companion animal guardian (0=No)												
Yes	-0.56	0.79	-0.71	0.478	0.05	0.14	0.33	0.742	0.51	0.64	0.79	0.427

Table S2 (cont.)

	Anxiety (n = 1049)				Stress (n = 1034)			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Step 1	$R^2 = 0.071$ $\chi^2(12) = 83.47, p < 0.001$				$R^2 = 0.084$ $\chi^2(12) = 91.39, p < 0.001$			
Intercept	6.40	0.50	12.81	<0.001	14.35	0.91	15.73	<0.001
Age (0=18-34 years)								
35-50 years	-1.37	0.36	-3.83	<0.001	-3.30	0.66	-5.03	<0.001
51-69 years	-2.02	0.38	-5.26	<0.001	-4.69	0.71	-6.59	<0.001
70+ years	-2.48	0.76	-3.28	0.001	-6.57	1.40	-4.70	<0.001
Gender (0=Female)								
Male	-1.19	0.38	-3.12	0.002	-1.83	0.70	-2.59	0.010
Highest level of education (0=School or below)								
Undergraduate	-0.72	0.47	-1.54	0.123	-0.60	0.85	-0.70	0.484
Masters	-1.22	0.49	-2.51	0.012	0.17	0.89	0.19	0.850
Doctorate	-1.31	0.53	-2.49	0.013	-0.51	0.97	-0.53	0.597
Marital status (0=Single, separated, divorced, widowed)								
Partnered, not living together	1.00	0.64	1.58	0.116	1.39	1.14	1.21	0.226
Married or living with partner	-0.72	0.32	-2.27	0.023	0.13	0.59	0.22	0.823
Live with children (0=No)								
Yes	-0.13	0.36	-0.36	0.720	0.44	0.67	0.66	0.511
Country (0=United Kingdom)								
United States	0.07	0.34	0.20	0.840	-0.81	0.62	-1.30	0.192
Other	-0.66	0.41	-1.61	0.108	-1.90	0.76	-2.52	0.012
	Anxiety (n = 1049)				Stress (n = 1034)			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Step 2	$\Delta R^2 = 0.026$ $\chi^2(8) = 31.37, p < 0.001$				$\Delta R^2 = 0.026$ $\chi^2(8) = 27.66, p < 0.001$			
Intercept	6.40	0.69	9.21	<0.001	15.60	1.25	12.50	<0.001
Age (0=18-34 years)								
35-50 years	-1.20	0.36	-3.34	0.001	-3.08	0.65	-4.72	<0.001

51-69 years	-1.99	0.39	-5.08	<0.001	-4.53	0.71	-6.35	<0.001
70+ years	-2.93	0.81	-3.62	<0.001	-6.55	1.46	-4.48	<0.001
Gender (0=Female)								
Male	-1.17	0.38	-3.06	0.002	-1.80	0.70	-2.59	0.010
Highest level of education (0=School or below)								
Undergraduate	-0.59	0.47	-1.27	0.206	-0.38	0.84	-0.45	0.652
Masters	-1.07	0.49	-2.17	0.030	0.18	0.90	0.20	0.845
Doctorate	-1.06	0.54	-1.97	0.049	-0.25	0.98	-0.26	0.797
Marital status (0=Single, separated, divorced, widowed)								
Partnered, not living together	1.10	0.64	1.73	0.085	1.31	1.13	1.16	0.246
Married or living with partner	-0.61	0.32	-1.89	0.060	0.07	0.58	0.12	0.907
Live with children (0=No)								
Yes	-0.13	0.36	-0.36	0.719	0.46	0.66	0.69	0.488
Country (0=United Kingdom)								
United States	-0.28	0.35	-0.80	0.425	-1.29	0.64	-2.03	0.043
Other	-0.77	0.42	-1.85	0.065	-2.21	0.76	-2.91	0.004
Communicated via verbal means (0=Average)								
Less than average	0.59	0.35	1.67	0.095	1.16	0.64	1.81	0.070
More than average	0.81	0.34	2.37	0.018	1.28	0.62	2.05	0.041
Communicated face-to-face (0=Average)								
Less than average	0.21	0.38	0.57	0.572	-0.32	0.69	-0.47	0.639
More than average	0.06	0.37	0.17	0.866	-1.60	0.66	-2.41	0.016
Left the house to exercise (0=Average)								
Less than average	-0.16	0.40	-0.41	0.681	-0.99	0.72	-1.38	0.169
More than average	-0.89	0.36	-2.50	0.013	-2.10	0.65	-3.25	0.001
Working during pandemic (0=No)								
Yes	-0.59	0.38	-1.57	0.116	-0.28	0.68	-0.41	0.684
Period of isolation >1 week (0=No)								
Yes	1.12	0.33	3.42	0.001	0.95	0.59	1.61	0.107
	Anxiety (n = 1049)				Stress (n = 1034)			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Step 3	$\Delta R^2 = 0.010$				$\Delta R^2 = 0.003$			
	$\chi^2(5) = 9.88, p = 0.079$				$\chi^2(5) = 3.27, p = 0.658$			
Intercept	6.02	0.78	7.68	<0.001	14.57	1.42	10.29	<0.001

Age (0=18-34 years)									
35-50 years	-1.16	0.36	-3.21	0.001	-3.11	0.66	-4.74	<0.001	
51-69 years	-1.91	0.39	-4.86	<0.001	-4.51	0.72	-6.27	<0.001	
70+ years	-2.74	0.81	-3.36	0.001	-6.32	1.48	-4.28	<0.001	
Gender (0=Female)									
Male	-1.20	0.39	-3.08	0.002	-1.67	0.71	-2.34	0.019	
Highest level of education (0=School or below)									
Undergraduate	-0.52	0.47	-1.11	0.265	-0.32	0.85	-0.37	0.710	
Masters	-0.93	0.50	-1.87	0.062	0.36	0.91	0.40	0.690	
Doctorate	-0.91	0.54	-1.68	0.094	-0.07	0.99	-0.07	0.942	
Marital status (0=Single, separated, divorced, widowed)									
Partnered, not living together	1.02	0.64	1.59	0.113	1.35	1.14	1.18	0.238	
Married or living with partner	-0.63	0.32	-1.94	0.052	<0.01	0.59	<0.01	0.999	
Live with children (0=No)									
Yes	-0.31	0.37	-0.83	0.406	0.38	0.67	0.56	0.574	
Country (0=United Kingdom)									
United States	-0.25	0.36	-0.68	0.494	-1.42	0.66	-2.16	0.031	
Other	-0.68	0.43	-1.59	0.113	-2.28	0.79	-2.90	0.004	
Communicated via verbal means (0=Average)									
Less than average	0.57	0.35	1.63	0.104	1.10	0.64	1.71	0.088	
More than average	0.92	0.34	2.68	0.008	1.39	0.63	2.21	0.028	
Communicated face-to-face (0=Average)									
Less than average	0.20	0.38	0.53	0.594	-0.28	0.69	-0.41	0.682	
More than average	0.01	0.37	0.03	0.980	-1.62	0.67	-2.42	0.016	
Left the house to exercise (0=Average)									
Less than average	-0.22	0.40	-0.55	0.581	-1.04	0.72	-1.44	0.150	
More than average	-0.82	0.37	-2.25	0.025	-2.14	0.67	-3.20	0.001	
Working during pandemic (0=No)									
Yes	-0.54	0.38	-1.42	0.156	-0.25	0.69	-0.37	0.713	
Period of isolation >1 week (0=No)									
Yes	1.09	0.33	3.30	0.001	0.90	0.59	1.51	0.131	
Companion animal guardian (0=No)									
Yes	-0.20	0.57	-0.36	0.720	0.88	1.05	0.84	0.400	
Dog guardian (0=No)									
Yes	-0.01	0.38	-0.03	0.980	<0.01	0.70	<0.01	0.996	
Cat guardian (0=No)									

Yes	0.33	0.35	0.94	0.349	0.29	0.64	0.45	0.656
Fish guardian (0=No)								
Yes	0.63	0.39	1.60	0.111	<0.01	0.72	<0.01	1.000
Other companion animal guardian (0=No)								
Yes	0.81	0.38	2.15	0.032	0.65	0.68	0.94	0.345

Note: $\hat{\beta}$ are unstandardised regression coefficients, results in bold are statistically significant at $p < 0.05$.

Table S3. Results of robust hierarchical regression analyses for level of engagement with companion animals.

	Mental well-being				UCLA Loneliness Scale				Depression			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Fishes	$R^2 = 0.029$ $\chi^2(10) = 5.37, p = 0.865, n = 200$				$R^2 = 0.048$ $\chi^2(10) = 9.45, p = 0.450, n = 208$				$R^2 = 0.026$ $\chi^2(10) = 5.33, p = 0.868, n = 204$			
Intercept	44.67	4.74	9.42	<0.001	5.59	0.88	6.35	<0.001	8.58	3.99	2.15	0.033
Primary caregiver (0=No)												
Responsibility equally shared with another	2.22	4.05	0.55	0.585	-0.20	0.75	-0.27	0.788	-0.60	3.40	-0.18	0.860
Yes	-0.34	3.91	-0.09	0.931	0.07	0.73	0.09	0.926	1.03	3.31	0.31	0.756
Time spent daily on tank/pond maintenance (0= An average amount)												
Less than average	0.47	2.29	0.20	0.838	-0.17	0.42	-0.40	0.690	2.48	1.91	1.30	0.196
More than average	0.90	2.19	0.41	0.683	-0.44	0.41	-1.08	0.282	-0.68	1.83	-0.37	0.712
Time spent daily feeding fishes (0= An average amount)												
Less than average	2.07	4.14	0.50	0.618	-0.61	0.77	-0.79	0.431	-1.21	3.47	-0.35	0.727
More than average	0.66	1.99	0.33	0.740	0.10	0.37	0.27	0.791	-0.42	1.68	-0.25	0.801
Time spent daily watching fishes (0= An average amount)												
Less than average	2.22	2.28	0.97	0.332	0.08	0.43	0.19	0.848	-2.51	1.92	-1.31	0.193
More than average	-1.04	2.10	-0.49	0.623	0.18	0.39	0.46	0.647	0.01	1.75	0.01	0.996
Time spent daily talking to fishes (0= An average amount)												
Less than average	0.26	2.06	0.13	0.900	-0.76	0.38	-1.98	0.049	0.87	1.74	0.50	0.618
More than average	0.90	2.28	0.39	0.694	-0.46	0.42	-1.08	0.280	0.68	1.91	0.36	0.721
Dogs	Mental well-being				UCLA Loneliness Scale				Depression			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
	$R^2 = 0.053$ $\chi^2(12) = 30.65, p = 0.002, n = 581$				$R^2 = 0.063$ $\chi^2(12) = 38.41, p < 0.001, n = 609$				$R^2 = 0.056$ $\chi^2(12) = 34.89, p < 0.001, n = 592$			

Intercept		39.48	2.62	15.08	<0.001	5.40	0.46	11.71	<0.001	14.17	2.12	6.67	<0.001
Primary caregiver (0=No)													
	Responsibility equally shared with another	7.82	2.27	3.45	0.001	-1.33	0.40	-3.35	0.001	-6.46	1.84	-3.50	0.001
	Yes	6.97	2.28	3.06	0.002	-0.92	0.40	-2.31	0.021	-6.73	1.85	-3.64	<0.001
Time spent daily walking dogs (0= An average amount)													
	Less than average	-0.92	0.97	-0.95	0.343	0.41	0.17	2.35	0.019	1.05	0.80	1.31	0.189
	More than average	-0.20	1.05	-0.19	0.851	0.22	0.19	1.16	0.245	0.25	0.86	0.29	0.775
Time spent daily feeding dogs (0= An average amount)													
	Less than average	1.75	1.00	1.76	0.080	-0.06	0.18	-0.36	0.716	-0.33	0.81	-0.41	0.685
	More than average	0.34	1.06	0.32	0.748	-0.08	0.19	-0.45	0.651	-0.72	0.87	-0.84	0.403
Time spent daily petting dogs (0= An average amount)													
	Less than average	-0.33	1.25	-0.27	0.790	-0.08	0.22	-0.36	0.723	-0.91	1.02	-0.89	0.374
	More than average	-2.22	1.08	-2.07	0.039	0.09	0.19	0.45	0.656	1.78	0.88	2.03	0.043
Time spent daily talking to dogs (0= An average amount)													
	Less than average	2.41	1.22	1.97	0.050	-0.33	0.22	-1.49	0.138	-1.28	1.00	-1.28	0.202
	More than average	1.02	1.19	0.85	0.395	0.14	0.21	0.66	0.513	-0.08	0.98	-0.08	0.936
Time spent daily on other activities with dogs (0=An average amount)													
	Less than average	-1.80	1.15	-1.56	0.119	0.49	0.20	2.40	0.017	0.97	0.94	1.03	0.302
	More than average	-0.31	1.10	-0.28	0.778	0.34	0.20	1.71	0.087	0.74	0.90	0.82	0.413
		Mental well-being				UCLA Loneliness Scale				Depression			
		β	SE	t	p	β	SE	t	p	β	SE	t	p
Cats		$R^2 = 0.036$ $\chi^2(10) = 14.24, p = 0.162, n = 415$				$R^2 = 0.035$ $\chi^2(10) = 14.83, p = 0.139, n = 442$				$R^2 = 0.052$ $\chi^2(10) = 23.39, p = 0.009, n = 429$			
Intercept		43.88	2.77	15.85	<0.001	5.57	0.54	10.31	<0.001	12.65	2.28	5.54	<0.001
Primary caregiver (0=No)													
	Responsibility equally shared with another	2.04	2.26	0.90	0.369	-0.76	0.44	-1.72	0.086	-2.78	1.86	-1.49	0.137
	Yes	0.74	2.25	0.33	0.742	-0.28	0.44	-0.62	0.535	-2.04	1.86	-1.10	0.273
Time spent daily feeding cats (0= An average amount)													
	Less than average	1.76	1.16	1.52	0.130	-0.17	0.22	-0.78	0.437	-0.29	0.95	-0.31	0.761
	More than average	-0.42	1.34	-0.32	0.751	-0.06	0.25	-0.25	0.803	0.13	1.11	0.12	0.907
Time spent daily petting cats (0= An average amount)													
	Less than average	-0.46	1.31	-0.35	0.724	0.13	0.25	0.52	0.603	1.42	1.08	1.32	0.188
	More than average	-1.05	1.42	-0.74	0.461	0.46	0.27	1.69	0.093	1.31	1.18	1.11	0.268
Time spent daily talking to cats (0= An average amount)													
	Less than average	2.58	1.40	1.85	0.065	-0.38	0.27	-1.43	0.154	-4.29	1.15	-3.73	<0.001
	More than average	1.14	1.48	0.77	0.441	-0.49	0.28	-1.72	0.087	-2.42	1.23	-1.96	0.050
Time spent daily on other activities with cats (0= An average amount)													

Less than average	-1.50	1.38	-1.09	0.278	0.15	0.26	0.59	0.558	0.24	1.13	0.21	0.833
More than average	-0.43	1.50	-0.29	0.772	0.07	0.28	0.26	0.796	0.66	1.22	0.54	0.591

Table S3 (cont.)

	Anxiety				Stress			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Fishes	$R^2 = 0.036$				$R^2 = 0.047$			
	$\chi^2(10) = 7.34, p = 0.693, n = 203$				$\chi^2(10) = 9.46, p = 0.489, n = 201$			
Intercept	4.81	2.52	1.91	0.058	18.87	3.90	4.84	<0.001
Primary caregiver (0=No)								
Responsibility equally shared with another	-0.29	2.16	-0.13	0.895	-5.11	3.32	-1.54	0.126
Yes	0.96	2.11	0.45	0.650	-3.33	3.20	-1.04	0.299
Time spent daily on tank/pond maintenance (0= An average amount)								
Less than average	-0.67	1.20	-0.55	0.581	-2.46	1.87	-1.31	0.191
More than average	-0.99	1.16	-0.86	0.391	-2.78	1.80	-1.54	0.125
Time spent daily feeding fishes (0= An average amount)								
Less than average	-0.97	2.21	-0.44	0.661	-1.21	3.37	-0.36	0.721
More than average	0.19	1.05	0.18	0.856	-0.70	1.64	-0.43	0.671
Time spent daily watching fishes (0= An average amount)								
Less than average	0.37	1.22	0.30	0.766	-1.67	1.86	-0.90	0.369
More than average	0.88	1.11	0.80	0.427	-0.78	1.73	-0.45	0.651
Time spent daily talking to fishes (0= An average amount)								
Less than average	-1.21	1.09	-1.11	0.268	-2.26	1.69	-1.34	0.183
More than average	-0.49	1.19	-0.41	0.679	-0.09	1.87	-0.05	0.961
	Anxiety				Stress			
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Dogs	$R^2 = 0.071$				$R^2 = 0.048$			
	$\chi^2(12) = 48.03, p < 0.001, n = 592$				$\chi^2(12) = 28.19, p = 0.005, n = 587$			
Intercept	6.36	1.20	5.31	<0.001	16.25	2.23	7.30	<0.001
Primary caregiver (0=No)								
Responsibility equally shared with another	-2.80	1.03	-2.70	0.007	-4.38	1.91	-2.29	0.022

Yes	-3.03	1.04	-2.93	0.004	-6.04	1.92	-3.15	0.002
Time spent daily walking dogs (0= An average amount)								
Less than average	1.38	0.46	3.02	0.003	1.06	0.85	1.24	0.215
More than average	-0.06	0.49	-0.13	0.898	-0.46	0.92	-0.51	0.614
Time spent daily feeding dogs (0= An average amount)								
Less than average	0.34	0.46	0.74	0.461	-0.55	0.87	-0.63	0.529
More than average	0.16	0.50	0.32	0.749	-0.25	0.93	-0.27	0.784
Time spent daily petting dogs (0= An average amount)								
Less than average	-1.59	0.58	-2.74	0.006	-1.33	1.10	-1.21	0.226
More than average	-0.19	0.51	-0.37	0.711	0.62	0.94	0.66	0.511
Time spent daily talking to dogs (0= An average amount)								
Less than average	-0.89	0.57	-1.56	0.120	-1.57	1.07	-1.46	0.144
More than average	-0.51	0.56	-0.91	0.363	-1.30	1.04	-1.25	0.213
Time spent daily on other activities with dogs (0=An average amount)								
Less than average	0.17	0.54	0.31	0.754	0.38	1.01	0.38	0.704
More than average	0.95	0.52	1.83	0.067	1.35	0.97	1.40	0.162
Anxiety				Stress				
	$\hat{\beta}$	SE	t	p	$\hat{\beta}$	SE	t	p
Cats	$R^2 = 0.045$				$R^2 = 0.049$			
	$\chi^2(10) = 20.48, p = 0.025, n = 430$				$\chi^2(10) = 21.25, p = 0.019, n = 428$			
Intercept	4.94	1.41	3.51	<0.001	15.76	2.53	6.23	<0.001
Primary caregiver (0=No)								
Responsibility equally shared with another	-1.12	1.16	-0.96	0.336	-2.73	2.07	-1.32	0.188
Yes	-0.83	1.16	-0.72	0.474	-3.65	2.07	-1.77	0.078
Time spent daily feeding cats (0= An average amount)								
Less than average	0.40	0.58	0.70	0.486	-1.05	1.04	-1.02	0.310
More than average	-0.08	0.68	-0.12	0.904	0.04	1.21	0.04	0.972
Time spent daily petting cats (0= An average amount)								
Less than average	1.19	0.65	1.83	0.068	1.32	1.17	1.13	0.261
More than average	1.34	0.71	1.88	0.061	1.45	1.29	1.13	0.260
Time spent daily talking to cats (0= An average amount)								
Less than average	-1.35	0.70	-1.94	0.053	-3.65	1.25	-2.92	0.004
More than average	-1.76	0.75	-2.35	0.019	-3.01	1.35	-2.23	0.026

Time spent daily on other activities with cats (0= An average amount)

Less than average	-0.73	0.68	-1.07	0.285	0.07	1.23	0.06	0.956
More than average	0.96	0.74	1.29	0.197	1.39	1.34	1.04	0.299

Note: $\hat{\beta}$ are unstandardised regression coefficients, results in bold are statistically significant at $p < 0.05$