

Table 3 (supplementary material) - Additional demographic data

Domain	Classification	Number N (%)
Education	Higher/university	662 (50%)
	Further/A-level	261 (20%)
	Secondary	403 (30%)
Occupation*	Professional	367 (28%)
	Skilled	60 (5%)
	Unskilled	19 (1%)
	Unemployed	4 (0.3%)
	Retired	1053 (80%)
Ethnicity [†]	Caucasian	1292 (97%)
	Other	27 (2%)
	Not specified	7 (0.5%)

* For occupation participants could choose more than one option e.g. professional and retired. Therefore percentages summate to more than 100%.

[†] Ethnicity options were White-British, White-Irish, Mixed-White and Black Caribbean, Mixed-White and Black African, Mixed-White and Asian, Asian/Asian British-Indian, Asian/Asian British-Pakistani, Asian/Asian British-Bangladeshi, Black/Black British-Caribbean, Black/Black British-African, Chinese, and Other. These were grouped as indicated in the table.

Table 4 (supplementary material) - Associations between factors (p-values not adjusted for multiple testing)

		Age	Gender		Smoking			Family history PD		Coffee		Alcohol		Hypertension		NSAID use		CCB use		Beta blocker use		Constipation		Head injury		Depression/anxiety	
			Male	Female	Current	Former	Never	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Age		-																									
Gender	Male	68 (64-72)																									
	Female	66 (64-70)																									
	p-value	<0.001																									
Smoking	Current	66 (63-69)	17	34																							
	Former	68 (64-72)	255	268																							
	Never	66 (64-71)	247	503																							
	p-value	0.001	<0.001																								
Family history of PD	Yes	67 (64-72)	84	178	11	433	589																				
	No	66 (63-69)	435	627	40	90	161																				
	p-value	<0.001	0.008		0.163																						
Coffee	Yes	67 (64-71)	484	703	45	470	672	226	961																		
	No	66 (63-69)	35	102	6	53	78	36	101																		
	p-value	0.009	0.001		0.933			0.044																			
Alcohol	Yes	67 (64-71)	484	654	41	464	633	224	914	1044	94																
	No	67 (64-70)	35	151	10	59	117	38	148	143	43																
	p-value	0.752	<0.001		0.047			0.813		<0.001																	
Hypertension	Yes	68 (65-73)	151	197	9	133	206	69	279	316	32	296	52														
	No	66 (64-70)	368	608	42	390	544	193	783	871	105	842	134														
	p-value	<0.001	0.062		0.259			0.983		0.411		0.576															
NSAID use	Yes	66 (64-71)	25	58	3	36	44	14	69	77	6	69	14	26	57												
	No	67 (64-71)	494	747	48	487	706	248	993	1110	131	1069	172	322	919												
	p-value	0.695	0.080		0.735			0.490		0.335		0.445		0.281													
CCB use	Yes	69 (66-73)	83	72	6	67	82	22	133	138	17	131	24	143	12	14	141										
	No	66 (64-71)	436	733	45	456	668	240	929	1049	120	1007	162	205	964	69	1100										
	p-value	<0.001	<0.001		0.591			0.063		0.787		0.584		<0.001		0.131											
Beta blocker use	Yes	68 (65-73)	52	51	5	50	48	19	84	94	9	88	15	63	40	6	97	32	71								
	No	66 (64-71)	467	754	46	473	702	243	978	1093	128	1050	171	285	936	77	1144	123	1098								
	p-value	<0.001	0.015		0.101			0.722		0.577		0.876		<0.001		0.847		<0.001									
Constipation	Yes	67 (63-72)	27	55	3	33	46	21	61	71	11	68	14	20	62	5	77	10	72	7	75						
	No	67 (64-71)	492	750	48	490	704	241	1001	1116	126	1070	172	328	914	78	1164	145	1097	96	1146						
	p-value	0.774	0.230		0.978			0.172		0.346		0.416		0.688		0.947		0.887		0.792							
Head injury	Yes	67 (64-71)	185	176	14	175	172	65	296	313	48	322	39	96	265	20	341	46	315	32	329	21	340				
	No	67 (64-71)	334	629	37	348	578	197	766	874	89	816	147	252	711	63	900	109	854	71	892	61	902				
	p-value	0.731	<0.001		<0.001			0.319		0.031		0.037		0.876		0.503		0.473		0.367		0.728					
Depression/anxiety	Yes	66 (63-71)	69	185	38	107	134	57	197	222	32	206	48	68	186	17	237	27	227	19	235	22	232	74	180		
	No	67 (64-71)	450	620	38	416	616	205	865	965	105	932	138	280	790	66	1004	128	942	84	986	60	1010	287	783		
	p-value	0.016	<0.001		0.260			0.238		0.190		0.013		0.844		0.756		0.553		0.843		0.069		0.457			
Erectile dysfunction	Yes	70 (66-75)			5	95	81	31	150	170	11	166	15	69	112	9	172	40	141	26	155	14	167	66	115	32	149
	No	67 (64-70)		NA	12	160	166	53	285	314	24	318	20	82	256	16	322	43	295	26	312	13	325	119	219	37	301
	p-value	<0.001			0.514			0.670		0.658		0.305		0.001		0.904		0.005		0.016		0.057		0.776		0.031	

Table 5 (supplementary material) - Analyses including only participants with a complete set of outcome data. UPSIT, RBDSQ and KS30 scores in all participants and those with the highest and lowest predicted risks of Parkinson's disease.

Outcome	All participants	100 with highest risk	100 with lowest risk	p-value highest v lowest risk
UPSIT				
N	697	53	54	-
Median (IQR)	32 (29 to 34)	30 (28 to 33)	33 (31 to 35)	<0.001
N (%) ≤ 27	102 (15%)	9 (17%)	4 (7%)	0.130
RBDSQ				
N	697	53	54	-
Median (IQR)	2 (1 to 3)	3 (2 to 6)	1 (0 to 3)	<0.001
N (%) ≥ 5	106 (15%)	17 (32%)	4 (7%)	0.001
KS30				
N	697	53	54	
Mean (95% CI)	56.9 (56.2 to 57.7)	54.3 (51.6 to 56.9)	58.9 (55.7 to 62.2)	0.027

Legend: UPSIT = University of Pennsylvania Smell Identification Test, IQR = Interquartile range, RBDSQ = REM sleep behaviour disorder screening questionnaire, KS30 = Kinesia score (number of keys taps in 30 seconds).