Supplementary Material

Neuropsychiatric Symptoms and Caregiver Stress in Parkinson's Disease with Cognitive Impairment, Alzheimer's Disease, and Frontotemporal Dementia

Supplementary Table 1. Multivariate linear regression analysis for caregiver burden among three diagnosis groups

	Frontotemporal disease		Alzheimer's disease		Parkinson's disease	
	Standardized beta	p	Standardized beta	p	Standardized beta	p
Mini-Mental State Examination	-	-	-0.187	0.006	-0.08	0.39
CVVLT-total	-	-	0.05	0.471	-	-
CVVLT-10 min recalls	-	-	-0.136	0.047	-	-
Digit forward	-0.055	0.37			-	-
Modified Trails B tests time (s)	-	-	0.029	0.639	-	-
Modified Trails B tests scores	-	-	0.112	0.13	-0.134	0.12
Calculations	-0.013	0.856	-	-	-	-
Visuospatial-Pentagone	0.024	0.721	-	-	-	-
NPI-total	0.794	<0.001	0.299	<0.001	0.155	0.018

CVVLT, Chinese version verbal learning test; NPI-total, Neuropsychiatric Inventory total scores; Significance at p<0.05

Supplementary Table 2. Multivariate linear regression analysis for Neuropsychiatric Inventory total scores

	Frontotemporal disease		Alzheimer's disease		Parkinson's disease	
	Standardized beta	p	Standardized beta	p	Standardized beta	p
Mini-Mental State Examination	-	-	-0.008	0.912	-	-
CVVLT-total	-	-			-	-
CVVLT-10 min recalls	-	-			-	-
Digit forward	-	-	-0.029	0.602	-	-
Digit backward	-	-	-0.044	0.484	-	-
Modified Trails B tests time (s)	-	-	0.023	0.747	-	-
Modified Trails B tests scores	-	-	-0.073	0.391	-	-
Calculations	-0.131	0.22	0.02	0.797	-	-
Visuospatial-Pentagone	-0.148	0.17	-	-	-	-
Geriatric depression score	-	-	0.276	<0.001	0.364	<0.001

CVVLT, Chinese version verbal learning test; NPI-total scores, sum of 12 domains in the NPI (frequency x severity)

Supplementary Table 3. Neuropsychiatric Inventory (NPI) subdomains for predicting caregiver burden in three diagnosis groups

NPI subdomains	Correlation coefficient	Multivariate regression model		Correlation coefficient	Multivariate regression model	
		Standardized beta	p		Standardized beta	p
Alzheimer's disease mild cognitive impairment				*Alzheimer's disease dementia*		
Agitation	0.323**	0.207	0.001	-	-	-
Appetite	0.179**	0.073	0.162	-	-	-
Delusion	0.180**	0.1307	0.011	0.445**	0.247	0.013
Depression	0.205**	0.116	0.027	-		
Irritability	0.363**	0.236	0.001	0.298**	0.155	0.085
Disinhibition	-	-	-	0.316**	0.066	0.529
Elation	-	-	-	0.405**	0.227	0.036
Hallucination	-	-	-	0.431**	0.216	0.029
Parkinson's disease mild cognitive impairment				*Parkinson's disease dementia*		
Agitation	0.241**	0.097	0.318	-	-	-
Depression	0.198*	0.102	0.260	-	-	-
Hallucination	0.216*	0.198	0.027	-	-	-
Irritability	0.307**	0.245	0.013	-	-	-
Delusion	-	-	-	0.427*	0.427	0.017
Frontotemporal disease with CDR=0.5				*Frontotemporal disease dementia*		
Anxiety	-	-	-	0.217*	0.130	0.094
Delusion	-	-	-	0.454**	0.342	0.001
Hallucination	-	-	-	0.374**	0.183	0.038

MCI, mild cognitive impairment; CDR, Clinical Dementia Rating

Regression model analysis included only the significant NPI sub-domains from the correlational analysis

*p<0.05; **p<0.01