Supplementary Table S1. Demographic and clinical characteristics across obstructive sleep apnoea severity groups as defined by the apnoea-hypopnoea index.

AHI CATEGORY	Non	Mild	Moderate	Severe	Total	
	N=20	N=30	N=17	N=16	N=83	
Age	63.8 ± 7.6	67.8 ± 7	70.4 ± 8.4	67.9 ± 6.2	67.4 ± 7.5	*moderate>non
Education, years	12.7 ± 2.2	14.2 ± 3.9	13.1 ± 3	12.8 ± 3.3	13.3 ± 3.2	
BMI (kg/m^2)	27.3 ± 6.1	26.5 ± 8.9	29 ± 4.4	30.9 ± 4.6	28 ± 6.9	
MMSE	29.2 ± 0.8	28.5 ± 1.8	27.9 ± 2.1	28.8 ± 1.1	28.6 ± 1.6	
CIRS	4.4 ± 4.2	4.8 ± 3.4	4.1 ± 3.6	5.8 ± 4.0	4.8 ± 3.8	
Alcohol	3.4 ± 3.5	6.8 ± 8.0	3.2 ± 4.7	4.2 ± 8.9	4.7 ± 6.8	
GDS	5.1 ± 3.9	3.8 ± 3.3	2.9 ± 2.8	4.7 ± 4.5	4.1 ± 3.6	
ESS	8.9 ± 5.9	7.6 ± 4	6.5 ± 3.2	7.7 ± 4.6	7.6 ± 4.4	
ODI (n/hr)	4.3 ± 3.9	7.4 ± 6.7	14.2 ± 10	43.8 ± 25	15.1 ± 19.1	**severe>non **severe>mild **severe>moderate
SpO$_2$ lowest, %	89.4 ± 3.4	86.5 ± 6.2	83.4 ± 6.3	81.6 ± 5.6	85.6 ± 6.1	**severe>non *severe>mild
SpO$_2$ <90%, %TST	1.6 ± 4.3	2.6 ± 5.1	4.6 ± 4.9	10.9 ± 14.3	4.4 ± 8.2	**severe>non **severe>mild
Sleep Efficiency, %	80.3 ± 7.8	74.1 ± 12.9	76.1 ± 9	72.4 ± 16.3	75.7 ± 12.1	
Awakening Index (n/hr)	4 ± 1.6	7.1 ± 8.4	5.4 ± 1.9	10.4 ± 9.1	6.6 ± 6.8	*severe>non
Arousal Index (n/hr)	10.2 ± 3.3	15.6 ± 5.7	20.8 ± 15.7	38.6 ± 17.6	19.8 ± 14.7	*moderate>non **severe>non **severe>mild **severe>moderate
RAVLT, z-score	0.3 ± 1.2	0.1 ± 1.0	-0.5 ± 1.3	-0.1 ± 1.0	0.0 ± 1.1	
Females, n (%)	15 (75)	19 (63.3)	10 (62.5)	9 (52.9)	53 (63.9)	
Diabetes, n (%)	3 (15)	4 (13.3)	2 (12.5)	2 (11.8)	11 (13.3)	
HTN, n (%)	9 (45)	8 (26.7)	11 (68.8)	8 (47.1)	36 (43.4)	
CVD, n (%)	4 (20)	8 (26.7)	2 (12.5)	1 (5.9)	15 (18.1)	
MD, n (%)	4 (20)	4 (13.3)	1 (6.3)	3 (17.6)	12 (14.5)	
Diabetes medication, n (%)	0 (0)	4 (13.3)	1 (6.3)	2 (11.8)	7 (8.4)	
HTN medication, n (%)	8 (40)	6 (20)	10 (62.5)	7 (41.2)	31 (37.3)	
Antidepressants, n (%)	8 (40)	8 (26.7)	4 (25)	7 (41.2)	27 (32.5)	
MCI, n (%)	16 (80)	21 (70)	14 (87.5)	11 (64.7)	62 (74.7)	

BMI = body mass index; MMSE = mini mental state examination; CIRS = cumulative illness rating scale; GDS = geriatric depression scale; ESS = Epworth sleepiness scale; ODI = oxygen desaturation index; SpO$_2$ = saturation of oxygen; RAVLT = Rey auditory verbal learning task; HTN = hypertension; CVD = cardiovascular disease; MD = major depression; MCI = mild cognitive impairment; *p<0.05, **p<0.01

Supplementary Table S2. Demographic and clinical characteristics between subjects with mild cognitive impairment and those without.

	MCI N=62	Non-MCI N=21	Sig.
Age	67.4 ± 7.8	67.3 ± 7.5	0.975
Females, n (%)	38 (61.3)	15 (71.4)	0.403
Education, years	12.9 ± 3.3	13.5 ± 3.3	0.465
BMI	26.2 ± 5.3	28.8 ± 7.3	0.159
MMSE	28.4 ± 1.7	28.6 ± 1.6	0.625
GDS	3.4 ± 2.9	4.3 ± 3.9	0.352
ESS	7.3 ± 4.6	7.8 ± 4.4	0.672
ODI (n/hr)	18.2 ± 24.7	14 ± 16.9	0.390
SpO$_2$ lowest, %	86.5 ± 6.5	85.3 ± 6	0.433
SpO$_2$ <90%, %TST	4.3 ± 8.8	4.4 ± 8.1	0.978
Sleep Efficiency, %	**70.4 ± 12.4**	**77.5 ± 11.5**	**0.020**
Awakening Index (n/hr)	8.1 ± 6.7	6.1 ± 6.8	0.241
Arousal Index (n/hr)	25 ± 21.3	18.1 ± 11.4	0.168
RAVLT, z-score	**0.5 ± 1**	**-0.2 ± 1.1**	**0.010**
Diabetes, n (%)	2 (3.2)	9 (42.9)	0.560
HTN, n (%)	8 (12.9)	28 (133.3)	0.534
CVD, n (%)	4 (6.5)	11 (52.4)	0.869
MDE, n (%)	3 (4.8)	9 (42.9)	0.979
Diabetes Medication, n (%)	2 (3.2)	5 (23.8)	0.835
HTN Medication, n (%)	8 (12.9)	23 (109.5)	0.975
Antidepressants, n (%)	5 (8.1)	22 (104.8)	0.324

BMI = body mass index; MMSE = mini mental state examination; CIRS = cumulative illness rating scale; GDS = geriatric depression scale; ESS = Epworth sleepiness scale; ODI = oxygen desaturation index; SpO$_2$ = saturation of oxygen; RAVLT = Rey auditory verbal learning task; HTN = hypertension; CVD = cardiovascular disease; MD = major depression; MCI = mild cognitive impairment; *p<0.05, **p<0.01