

Data Supplement for Tanev et al., Sleep Patterns and Neuropsychiatric Symptoms in Hospitalized Patients With Dementia, J Neuropsychiatry Clin Neurosci (doi: 10.1176/appi.neuropsych.16090166)

<b>eTable 1: Beginning and End Averages of Sleep Parameters and Neuropsychiatric Symptoms</b>										
<b>Variable</b>	<b>Average First Two Nights</b>					<b>Average Last Two Nights</b>				
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>	<b>N</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Min</b>	<b>Max</b>
<b>Sleep minutes</b>	28	381	165.3	21	630	28	387.4	177.9	0	630
<b>Mean sleep episode</b>	28	77.52	135.9	3.61	630	28	123.4	203.4	0	630
<b>Sleep efficiency</b>	27	76.56	19.93	11.3	100	25	74.36	18.99	40.5	100
<b>Wake minutes</b>	28	249	165.3	0	609	28	242.6	177.9	0	630
<b>Wake after sleep onset</b>	27	124	116.2	0	541	25	144.7	106.4	0	331
<b>Mean wake episode</b>	28	56.06	124.9	0	609	28	38.1	116.6	0	630
<b>NPI total</b>	28	37.09	16.53	5.5	74	28	18.8	13.31	1	58.5
<b>NPI agitation/aggression subscale</b>	28	4.66	3.97	0	12	28	2.3	2.73	0	9
<b>NPI depression/dysphoria subscale</b>	28	2.96	3.3	0	12	28	1.63	2.59	0	8
<b>NPI delusions subscale</b>	28	1.5	2.23	0	7.5	28	1.18	2.39	0	9
<b>NPI hallucinations subscale</b>	28	1.75	2.37	0	7.5	28	1.02	2.18	0	10
<b>NPI anxiety subscale</b>	28	3.07	2.97	0	9	28	2.23	2.7	0	7.5
<b>NPI elation/euphoria subscale</b>	28	0.07	0.38	0	2	28	0.2	0.77	0	4
<b>NPI apathy/indifference subscale</b>	28	5.43	4.28	0	12	28	3.09	3.16	0	12
<b>NPI disinhibition subscale</b>	28	2.46	3.1	0	12	28	0.41	1.03	0	4
<b>NPI irritability subscale</b>	28	4.54	3.86	0	12	28	2	2.7	0	9
<b>NPI aberrant motor behavior subscale</b>	28	1.82	3.31	0	12	28	0.57	1.45	0	6
<b>NPI nighttime behaviors subscale</b>	28	3.73	3.29	0	12	28	1.79	2.67	0	12
<b>NPI appetite/eating behaviors subscale</b>	28	4.79	4.1	0	12	28	2.45	4	0	12
<b>DBRS</b>	29	7.02	1.91	5.25	11.5	29	5.9	0.96	5.25	9.5
<b>RAGE</b>	29	9.26	8.69	0	25.5	29	2.93	5.52	0	24
<b>MADRS</b>	25	28.36	10.44	7	44	11	18.27	12.03	3	44
<b>CSDD</b>	26	13.85	5.91	1	22	11	8.45	8.56	1	28

**Averages of sleep parameters are calculated based on first or last 2 nighttime measurements. Averages of neuropsychiatric symptoms are calculated based on first or last 2 daytime measurements.**

**eTable 2: Changes in Sleep Parameters and Neuropsychiatric Symptoms**

Variable	N	Difference (start-end)*	SD	95% CI	Min	Max	DF	Paired T-Test	P
Sleep minutes	27	-2.3	27.3	[-13.1058, 8.4983]	-	56.10	26	-0.44	0.6647
Mean sleep episode	27	-5.6	23.8	[-14.9954, 3.8260]	-	25.98	26	-1.22	0.2335
Sleep efficiency	24	0.0	1.7	[-0.7555, 0.6871]	-3.55	2.87	23	-0.1	0.9228
Wake minutes	27	2.3	27.3	[-8.4983, 13.1058]	-56.10	101.50	26	0.44	0.6647
Wake after sleep onset	24	-0.4	9.1	[-4.2625, 3.3947]	-15.96	21.86	23	-0.23	0.8167
NPI total score	28	1.9	2.1	[1.0952, 2.6986]	-0.73	7.90	27	4.85	<b>&lt;0.0001</b>
NPI agitation/aggression score	28	0.2	0.3	[0.0912, 0.3486]	-0.30	1.20	27	3.51	<b>0.0016</b>
NPI depression/dysphoria score	28	0.1	0.3	[-0.0340, 0.2309]	-0.80	1.20	27	1.52	0.1389
NPI delusions score	28	0.1	0.2	[-0.0417, 0.1508]	-0.55	0.67	27	1.16	0.2549
NPI hallucinations score	28	0.1	0.3	[0.0114, 0.2372]	-0.17	1.10	27	2.26	0.0321
NPI anxiety score	28	0.1	0.3	[-0.0386, 0.2201]	-0.64	1.00	27	1.44	0.1616
NPI elation/euphoria score	28	0.0	0.1	[-0.0489, 0.0221]	-0.44	0.17	27	-0.77	0.4453
NPI apathy/indifference score	28	0.3	0.4	[0.0934, 0.4139]	-0.67	1.10	27	3.25	<b>0.0031</b>
NPI disinhibition score	28	0.2	0.3	[0.0967, 0.3589]	0.00	1.20	27	3.56	<b>0.0014</b>
NPI irritability score	28	0.2	0.3	[0.0850, 0.3172]	-0.50	0.90	27	3.56	<b>0.0014</b>
NPI aberrant behaviors score	28	0.1	0.3	[-0.00574, 0.2138]	-0.29	1.20	27	1.94	0.0623
NPI nighttime behaviors score	28	0.2	0.6	[0.0201, 0.4635]	-0.80	2.40	27	2.24	0.0337
NPI appetite/eating behaviors score	28	0.3	0.4	[0.1348, 0.4344]	-0.17	1.20	27	3.9	<b>0.0006</b>
RAGE	28	0.5	0.6	[0.2659, 0.7606]	-0.40	2.30	27	4.26	<b>0.0002</b>
DBRS	28	0.1	0.1	[0.0329, 0.1387]	-0.07	0.45	27	3.33	<b>0.0025</b>
MADRS	11	1.1	1.6	[0.00599, 2.1540]	-0.93	4.25	10	2.24	0.0490
CSDD	11	0.6	0.9	[0.0130, 1.2724]	-1.20	1.86	10	2.27	0.0463

\*Changes from beginning to end of participation, weighted for participation days

**eTable 3: Additional Correlations of Beginning to End of Study Weighted Changes in Sleep Parameters and Neuropsychiatric Symptoms**

	Sleep minutes	Mean sleep episode	Sleep efficiency	Wake minutes	Wake after sleep onset
<b>NPI total score</b>	r=-0.07519	-0.16	-0.03	0.08	0.07
	p=0.7093	0.42	0.90	0.71	0.73
	N=27	27.00	24.00	27.00	24.00
<b>NPI agitation subscale</b>	-0.32	-0.33	-0.20	0.32	0.22
	0.10	0.09	0.36	0.10	0.29
	27.00	27.00	24.00	27.00	24.00
<b>NPI depression subscale</b>	0.34	0.23	0.41	-0.34	-0.48
	0.09	0.26	0.05	0.09	0.02
	27.00	27.00	24.00	27.00	24.00
<b>NPI delusions subscale</b>	-0.37	-0.48	-0.12	0.37	0.11
	0.06	0.01	0.59	0.06	0.61
	27.00	27.00	24.00	27.00	24.00
<b>NPI hallucinations subscale</b>	-0.29	-0.31	-0.06	0.29	0.11
	0.14	0.11	0.78	0.14	0.62
	27.00	27.00	24.00	27.00	24.00
<b>NPI anxiety subscale</b>	-0.36	-0.58	-0.04	0.36	-0.08
	0.07	0.0014	0.87	0.07	0.71
	27.00	27.00	24.00	27.00	24.00
<b>NPI elation subscale</b>	0.05	0.00	0.16	-0.05	-0.14
	0.82	0.99	0.47	0.82	0.51
	27.00	27.00	24.00	27.00	24.00
<b>NPI apathy subscale</b>	0.54	0.57	0.18	-0.54	-0.06
	0.0034	0.0020	0.40	0.0034	0.78
	27.00	27.00	24.00	27.00	24.00
<b>NPI disruptive behaviors subscale</b>	-0.36	-0.38	-0.41	0.36	0.48
	0.07	0.05	0.05	0.07	0.02
	27.00	27.00	24.00	27.00	24.00
<b>NPI irritability subscale</b>	0.35	0.35	-0.02	-0.35	0.04
	0.08	0.07	0.93	0.08	0.85
	27.00	27.00	24.00	27.00	24.00
<b>NPI aberrant behaviors subscale</b>	0.15	-0.13	0.16	-0.15	-0.12
	0.46	0.53	0.45	0.46	0.59
	27.00	27.00	24.00	27.00	24.00
<b>NPI nighttime behaviors subscale</b>	-0.18	-0.08	-0.07	0.18	0.12
	0.37	0.70	0.74	0.37	0.58
	27.00	27.00	24.00	27.00	24.00

<b>DBRS total score</b>	-0.23	-0.27	-0.42	0.23	0.36
	0.25	0.18	0.04	0.25	0.08
	27.00	27.00	24.00	27.00	24.00
<b>RAGE total score</b>	-0.14	-0.18	-0.21	0.14	0.21
	0.47	0.38	0.34	0.47	0.33
	27.00	27.00	24.00	27.00	24.00
<b>MADRS total score</b>	0.20	0.35	0.38	-0.20	-0.39
	0.55	0.29	0.28	0.55	0.26
	11.00	11.00	10.00	11.00	10.00
<b>CSDD total score</b>	0.10	0.27	0.15	-0.10	-0.21
	0.77	0.43	0.67	0.77	0.56
	11.00	11.00	10.00	11.00	10.00