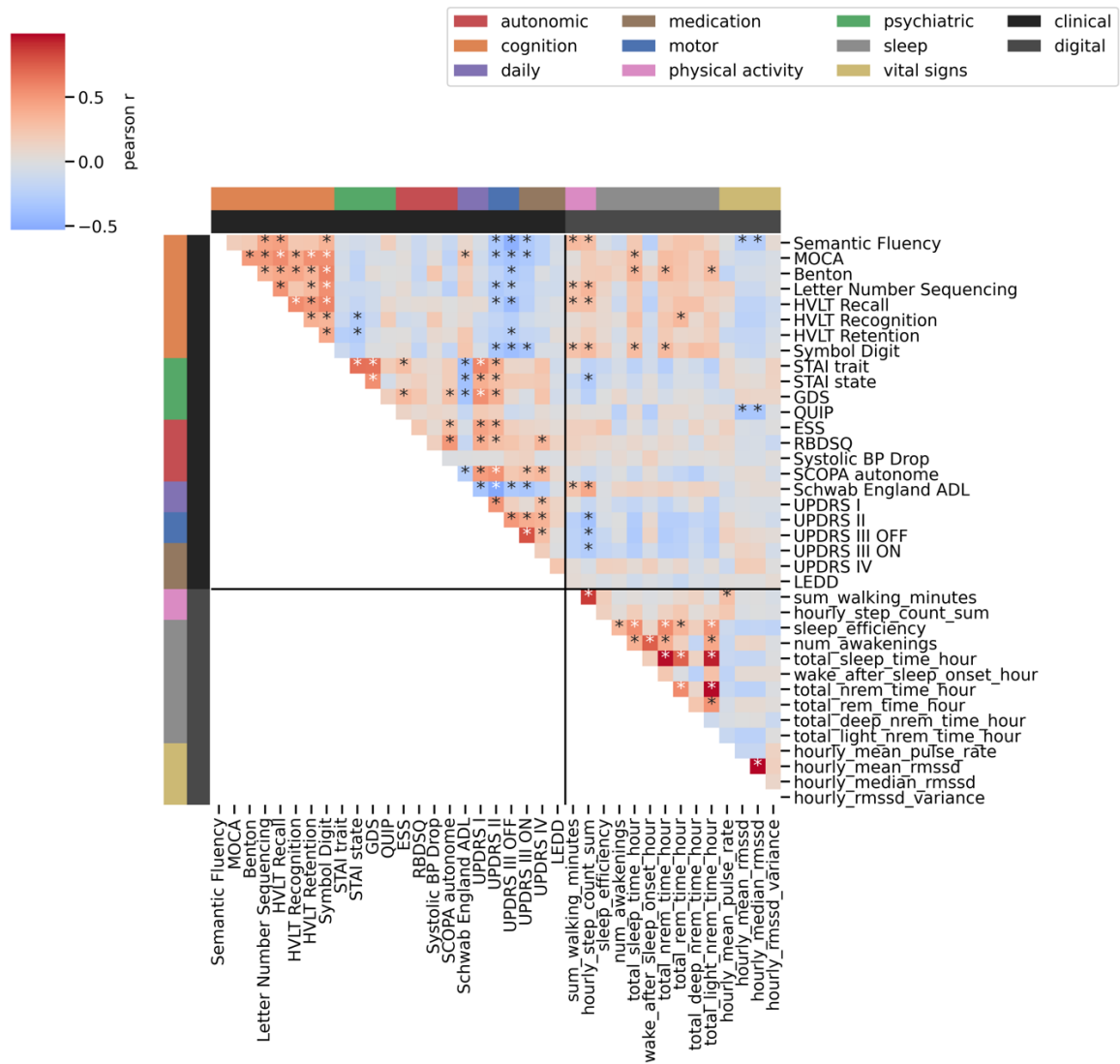


Supplemental Material

Digital monthly averages

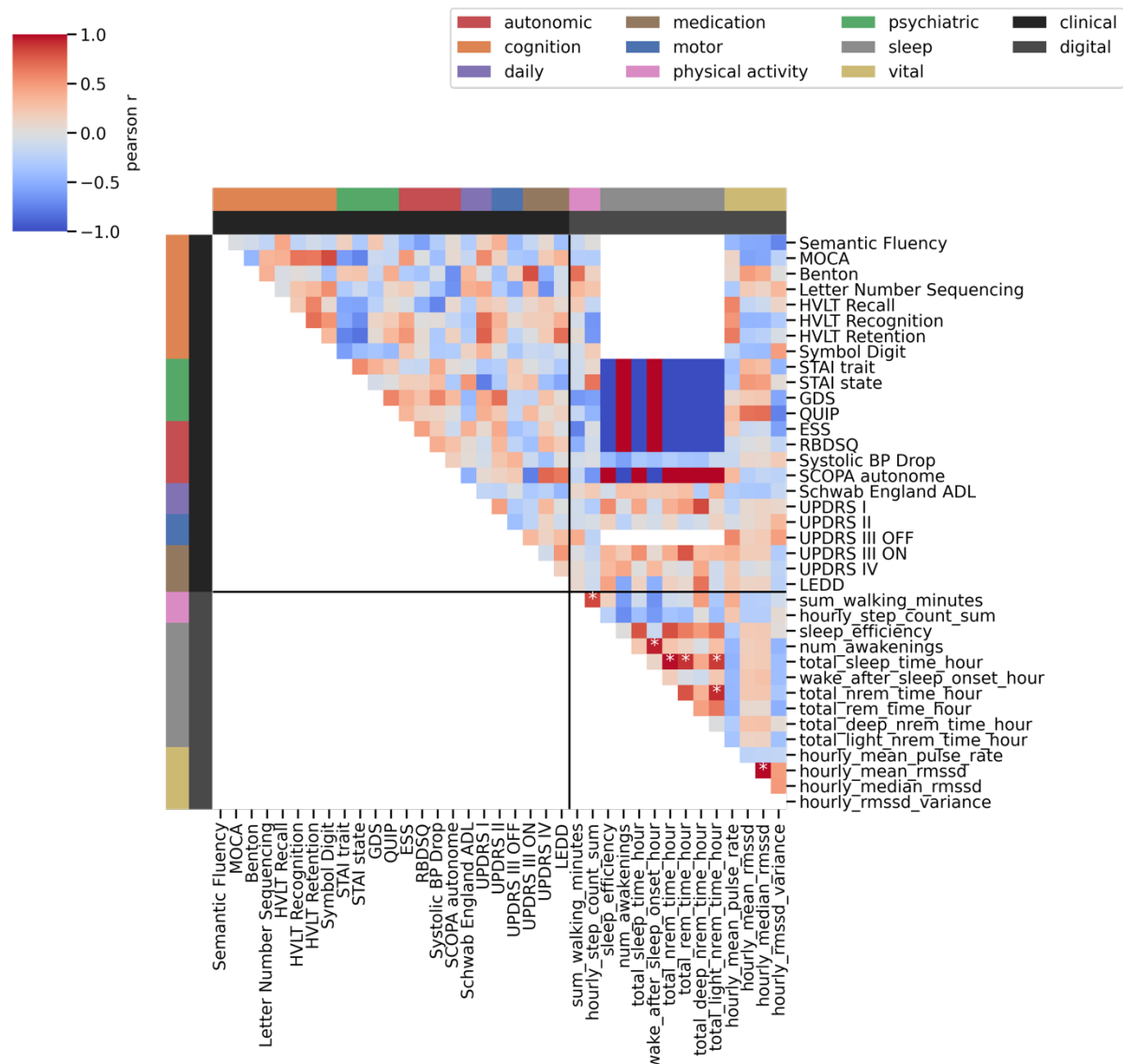
Instead of using a 3.5-day window around the clinic visit, we also evaluated a 30-day window. Due to the large, considered timeframe, more subjects and more visits were overlapping with digital data collection (N=116). Missingness was thus also further increased (84.1% - 99.53%). The monthly digital averages correlated with the clinical measures, revealing a similar pattern as the weekly digital averages (Supplemental Figure 1). Due to the increased sample size and thus power, more associations reached statistical significance at 0.05 FDR correction. Of note, two additional cognitive measures were associated with step count (Semantic Fluency, HVLT Recall). Again, half of the cognitive measures related to sleep measures. In this analysis, new associations with vital signs were revealed for Semantic Fluency and QUIP. Associations for ESS, UPDRS IV, and SCOPA autonome were not identified here. For the rate of change analysis, HVTL recall remained the most sensitive to change (Cohen's $d = 0.5$). Digital sleep measures remained the most sensitive digital ones and overall digital measures had slightly higher, but not significantly, sensitivity to change (clinical: 0.16, digital: 0.19, p -value = 0.41). Contrary to the digital weekly averages, the difference of the monthly averages did show associations with the difference between clinic visits (Supplemental Figure 3). Increases in UPDRS II related to decreases in light NREM sleep time, increases in UPDRS III ON related to increases in mean pulse rate, and increases in UPDRS IV related to decreases in walking minutes. Findings for this monthly analysis that were not significant in the weekly one, can again be attributed to the bigger sample size (mean N=26 vs mean N=10).

Supplemental Figure 1: Associations between digital monthly averages and clinical assessments



The heatmap displays the Pearson's r coefficient for each digital monthly average and clinical assessment in the Parkinson's disease group. If multiple visits overlapped with the digital data per person, the last visit to the clinic was chosen. Individual tests are grouped into modalities as indicated by the colours on the left and top. Asterisks indicate significant correlation after 0.05 FDR correction.

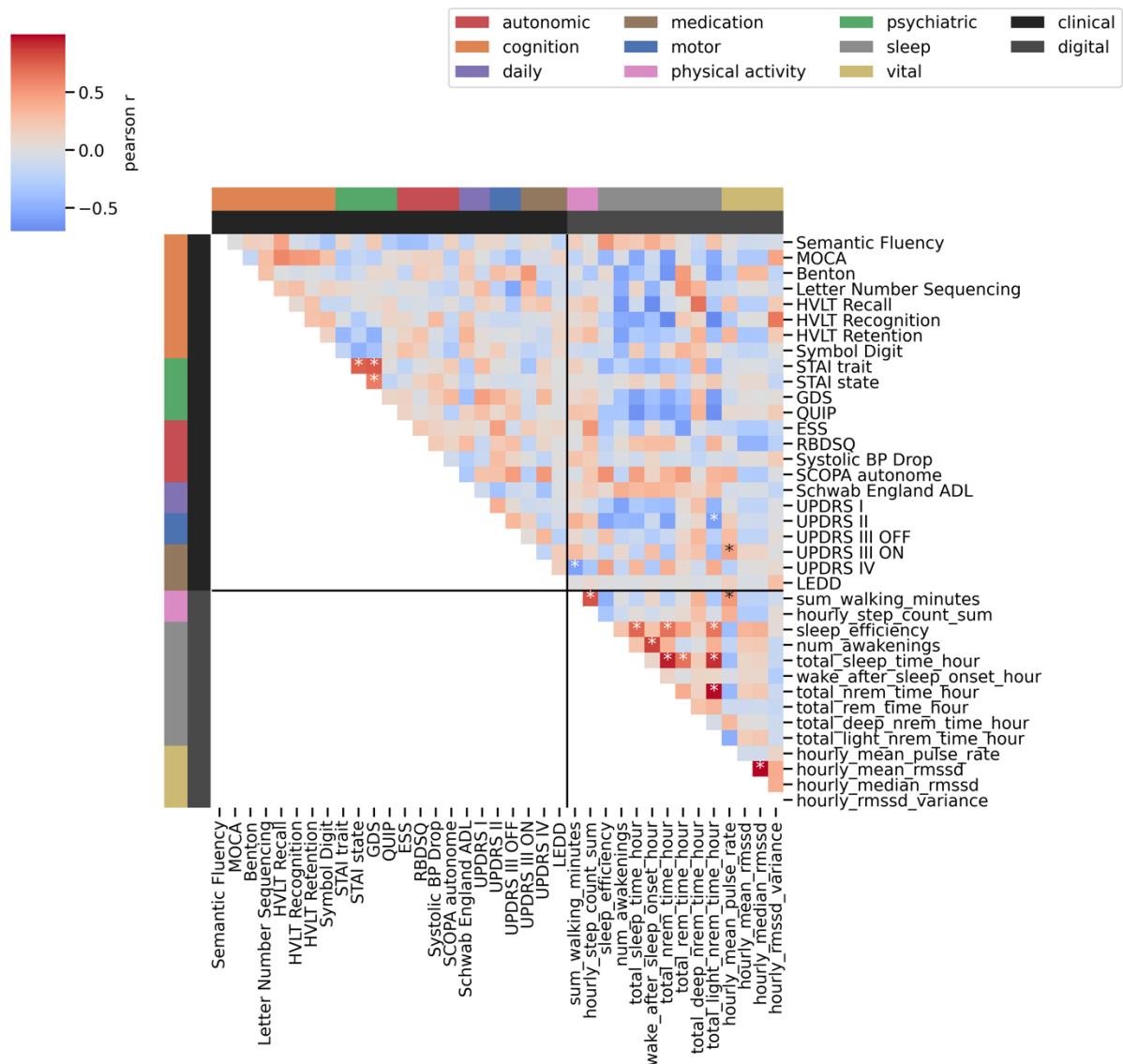
Supplemental Figure 2: Difference between visits is not related between digital weekly averages and clinical measures



The heatmap displays for every combination of digital and clinical measures the correlation between the mean rate of change over time. The domains can be seen on the left and top coded by the colour bars. The colour indicates the Pearson r coefficient and an asterisk indicates 0.05 FDR corrected significance.

ESS: Epworth Sleepiness Scale, RBDSQ: REM behavioral sleep disorder screening questionnaire, BP: blood pressure, SCOPA: Scale for Outcomes in Parkinson's disease for Autonomic Symptoms, MOCA: Montreal Cognitive Assessment, HVLT: Hopkins Verbal Learning Test, STAI: state-trait anxiety index, GDS: Geriatric Depression Scale, QUIP: Impulsive-Compulsive Disorders in PD, ADL: activities of daily living, UPDRS: Universal Parkinson's Disease Rating Scale, LEDD: Levodopa equivalent daily dosage, RMSSD: mean root mean squared successive differences

Supplemental Figure 3: Difference between visits is not related between digital monthly averages and clinical measures

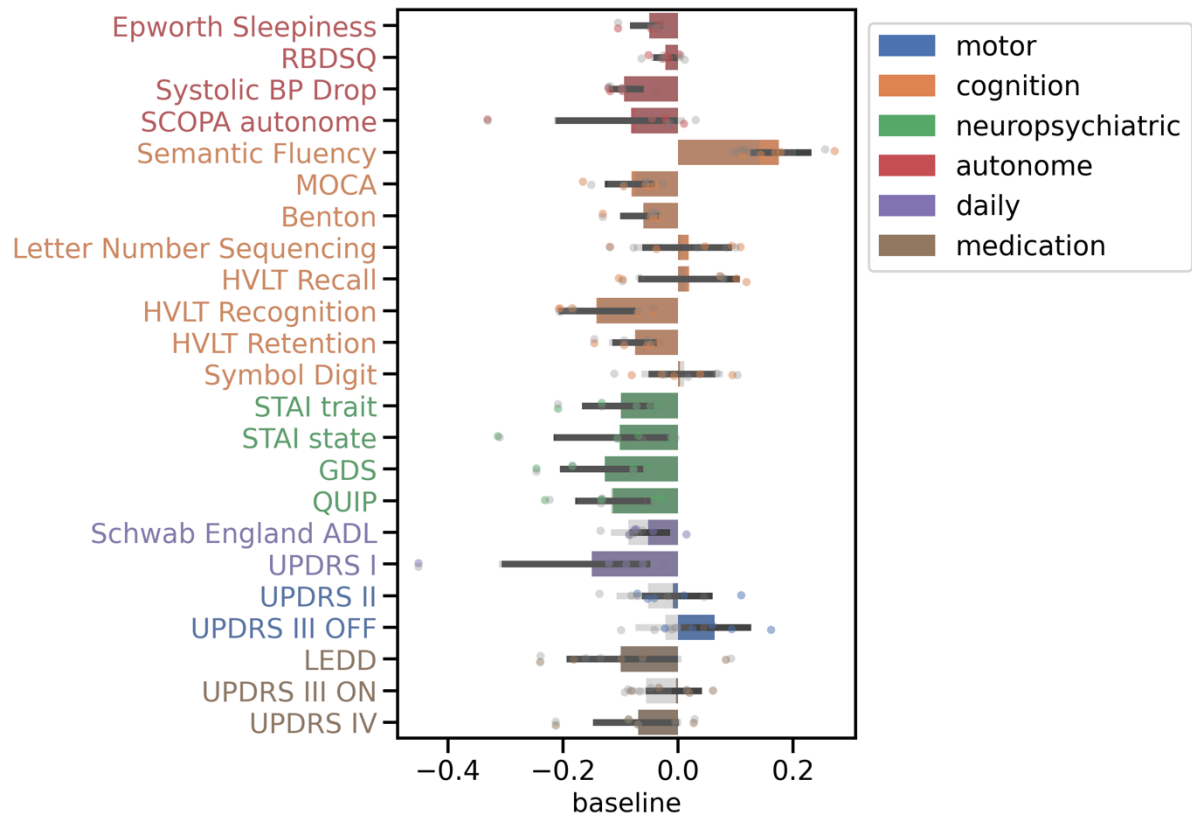


The heatmap displays for every combination of digital and clinical measures the correlation between the mean rate of change over time. The domains can be seen on the left and top coded by the colour bars. The colour indicates the Pearson r coefficient and an asterisk indicates 0.05 FDR corrected significance.

ESS: Epworth Sleepiness Scale, RBDSQ: REM behavioral sleep disorder screening questionnaire, BP: blood pressure, SCOPA: Scale for Outcomes in Parkinson's disease for Autonomic Symptoms, MOCA: Montreal Cognitive Assessment, HVLt: Hopkins Verbal Learning Test, STAI: state-trait anxiety index, GDS: Geriatric Depression Scale, QUIP: Impulsive-Compulsive Disorders in PD, ADL: activities

of daily living, UPDRS: Universal Parkinson's Disease Rating Scale, LEDD: Levodopa equivalent daily dosage, RMSSD: mean root mean squared successive differences

Supplemental Figure 4: Monthly digital outcome measures fail to predict clinical scores



The predictive performance (x-axis) of the 14 monthly digital averages (step count, walking minutes, NREM sleep time, deep NREM sleep time, light NREM sleep time, REM sleep time, sleep efficiency, number of awakenings, wake after sleep onset, total sleep time, mean pulse rate, mean RMSSD, median RMSSD, RMSSD variance) for each clinical measure (y-axis) as the mean R2 across the five outer cross-validation test sets with their 95% Confidence Interval. The grey bars show the respective baseline performance also with 95% CI. The dots display the individual data points. An asterisk indicates significant improvement over baseline at 0.05 significance (two-sided t-test with N=5). The colour indicates the domain of the clinical measure.

ESS: Epworth Sleepiness Scale, RBDSQ: REM behavioral sleep disorder screening questionnaire, BP: blood pressure, SCOPA: Scale for Outcomes in Parkinson's disease for Autonomic Symptoms,

MOCA: Montreal Cognitive Assessment, HVL: Hopkins Verbal Learning Test, STAI: state-trait anxiety index, GDS: Geriatric Depression Scale, QUIP: Impulsive-Compulsive Disorders in PD, ADL: activities of daily living, UPDRS: Universal Parkinson's Disease Rating Scale, LEDD: Levodopa equivalent daily dosage, RMSSD: mean root mean squared successive differences

Supplemental Table 1: Missingness of digital data

The percentage of missing data is shown for each digital outcome measure around the clinic visit. Missingness was computed as the difference to the expected hourly data rate for six days (24*6).

	count	mean
sum_walking_minutes	134	78.36339
hourly_step_count_sum	129	78.04156
sleep_efficiency	53	98.84696
num_awakenings	53	98.84696
total_sleep_time_hour	53	98.84696
wake_after_sleep_onset_hour	53	98.84696
total_nrem_time_hour	53	98.84696
total_rem_time_hour	53	98.84696
total_deep_nrem_time_hour	53	98.84696
total_light_nrem_time_hour	53	98.84696
hourly_mean_pulse_rate	129	78.07386
hourly_mean_rmssd	127	89.37008
hourly_median_rmssd	127	89.37008
hourly_rmssd_variance	123	92.46838

Supplemental Table 2: Association between digital weekly averages and clinical assessments

Results of the Pearson correlation analysis between clinical and digital markers. The Pearson's r coefficient, the associated p-value, the FDR corrected p-value, and the sample size is displayed.

f1	f2	N	pearson r	p-value	p-corrected FDR	sign
Semantic Fluency	MOCA	73	0.202439	0.085865	0.259126	
Semantic Fluency	Benton	74	0.226843	0.051947	0.177419	
Semantic Fluency	Letter Number Sequencing	74	0.334697	0.00356	0.031197	*
Semantic Fluency	HVLT Recall	74	0.447504	6.4E-05	0.001184	*
Semantic Fluency	HVLT Recognition	73	0.116517	0.326254	0.602213	
Semantic Fluency	HVLT Retention	74	0.187127	0.110387	0.30997	

Semantic Fluency	Symbol Digit	74	0.365282	0.001374	0.014521	*
Semantic Fluency	STAI trait	74	-0.03545	0.764284	0.883703	
Semantic Fluency	STAI state	74	-0.08188	0.488	0.742027	
Semantic Fluency	GDS	74	-0.04069	0.73068	0.870542	
Semantic Fluency	QUIP	74	0.214516	0.066453	0.215893	
Semantic Fluency	ESS	74	-0.01767	0.881224	0.93745	
Semantic Fluency	RBDSQ	74	-0.1761	0.133404	0.356815	
Semantic Fluency	Systolic BP Drop	74	-0.17757	0.13013	0.350877	
Semantic Fluency	SCOPA autonome	74	-0.15421	0.18958	0.464191	
Semantic Fluency	Schwab England ADL	74	0.113899	0.333914	0.605958	
Semantic Fluency	UPDRS I	74	0.009577	0.935457	0.963872	
Semantic Fluency	UPDRS II	74	-0.33247	0.003802	0.032888	*
Semantic Fluency	UPDRS III OFF	70	-0.43623	0.00016	0.002599	*
Semantic Fluency	UPDRS III ON	71	-0.36678	0.001655	0.017218	*
Semantic Fluency	UPDRS IV	72	-0.23568	0.046263	0.163888	
Semantic Fluency	LEDD	74	-0.05633	0.633583	0.825766	
Semantic Fluency	sum_walking_minutes	74	0.285853	0.013553	0.075223	
Semantic Fluency	hourly_step_count_sum	74	0.258508	0.026158	0.110963	
Semantic Fluency	sleep_efficiency	32	0.063703	0.729064	0.870173	
Semantic Fluency	num_awakenings	32	-0.09285	0.613266	0.811434	
Semantic Fluency	total_sleep_time_hour	32	0.290323	0.106981	0.304485	
Semantic Fluency	wake_after_sleep_onset_hour	32	-0.38001	0.031925	0.128086	
Semantic Fluency	total_nrem_time_hour	32	0.294865	0.101359	0.293499	
Semantic Fluency	total_rem_time_hour	32	0.198315	0.276569	0.549034	
Semantic Fluency	total_deep_nrem_time_hour	32	0.397034	0.024449	0.106997	
Semantic Fluency	total_light_nrem_time_hour	32	0.199179	0.274441	0.549034	
Semantic Fluency	hourly_mean_pulse_rate	74	0.06295	0.594153	0.810625	
Semantic Fluency	hourly_mean_rmssd	73	-0.12548	0.290163	0.566712	
Semantic Fluency	hourly_median_rmssd	73	-0.12449	0.294022	0.568101	
Semantic Fluency	hourly_rmssd_variance	72	0.11687	0.328233	0.602213	
MOCA	Benton	73	0.451103	6.19E-05	0.001178	*
MOCA	Letter Number Sequencing	73	0.529279	1.48E-06	4.94E-05	*
MOCA	HVLT Recall	73	0.525734	1.79E-06	5.41E-05	*
MOCA	HVLT Recognition	72	0.255907	0.030029	0.123451	
MOCA	HVLT Retention	73	0.54988	4.68E-07	2.08E-05	*
MOCA	Symbol Digit	73	0.506274	4.89E-06	0.000116	*
MOCA	STAI trait	73	-0.11881	0.316768	0.594274	
MOCA	STAI state	73	-0.21553	0.067059	0.216803	
MOCA	GDS	73	-0.00294	0.980292	0.986679	
MOCA	QUIP	73	-0.10752	0.365245	0.633471	
MOCA	ESS	73	0.045069	0.704975	0.859134	
MOCA	RBDSQ	73	-0.0932	0.432904	0.704924	
MOCA	Systolic BP Drop	73	-0.3264	0.004829	0.037837	*
MOCA	SCOPA autonome	73	-0.13545	0.253216	0.533677	
MOCA	Schwab England ADL	73	0.150944	0.202407	0.47836	
MOCA	UPDRS I	73	-0.06486	0.585655	0.803773	

MOCA	UPDRS II	73	-0.28795	0.0135	0.075223	
MOCA	UPDRS III OFF	69	-0.36741	0.001899	0.019161	*
MOCA	UPDRS III ON	70	-0.33822	0.004187	0.034424	*
MOCA	UPDRS IV	71	-0.24618	0.038503	0.14653	
MOCA	LEDD	73	-0.04741	0.69043	0.849525	
MOCA	sum_walking_minutes	73	0.080828	0.49664	0.751733	
MOCA	hourly_step_count_sum	73	0.229165	0.051149	0.176908	
MOCA	sleep_efficiency	32	0.328721	0.066214	0.215893	
MOCA	num_awakenings	32	0.079887	0.663835	0.843729	
MOCA	total_sleep_time_hour	32	0.575949	0.000562	0.007637	*
MOCA	wake_after_sleep_onset_hour	32	-0.4072	0.020719	0.095826	
MOCA	total_nrem_time_hour	32	0.558915	0.000884	0.010329	*
MOCA	total_rem_time_hour	32	0.455513	0.008797	0.05744	
MOCA	total_deep_nrem_time_hour	32	0.165725	0.364684	0.633471	
MOCA	total_light_nrem_time_hour	32	0.548928	0.00114	0.012451	*
MOCA	hourly_mean_pulse_rate	73	-0.05785	0.626876	0.820235	
MOCA	hourly_mean_rmssd	72	-0.08677	0.468625	0.729716	
MOCA	hourly_median_rmssd	72	-0.0667	0.577717	0.799916	
MOCA	hourly_rmssd_variance	71	-0.06295	0.60197	0.811434	
Benton	Letter Number Sequencing	74	0.388036	0.000635	0.008137	*
Benton	HVLT Recall	74	0.329893	0.0041	0.034424	*
Benton	HVLT Recognition	73	0.263101	0.024518	0.106997	
Benton	HVLT Retention	74	0.285298	0.013744	0.07565	
Benton	Symbol Digit	74	0.593503	2.51E-08	1.85E-06	*
Benton	STAI trait	74	0.029102	0.805577	0.890844	
Benton	STAI state	74	-0.15045	0.200726	0.47836	
Benton	GDS	74	0.121335	0.303101	0.580073	
Benton	QUIP	74	-0.03067	0.795328	0.890844	
Benton	ESS	74	0.028182	0.811608	0.894918	
Benton	RBDSQ	74	-0.16284	0.165688	0.427707	
Benton	Systolic BP Drop	74	-0.05767	0.625513	0.820235	
Benton	SCOPA autonome	74	-0.08057	0.494999	0.750955	
Benton	Schwab England ADL	74	0.174415	0.137213	0.365536	
Benton	UPDRS I	74	0.07538	0.523268	0.770548	
Benton	UPDRS II	74	-0.08931	0.449225	0.718752	
Benton	UPDRS III OFF	70	-0.29546	0.013022	0.074127	
Benton	UPDRS III ON	71	-0.29014	0.014113	0.077044	
Benton	UPDRS IV	72	-0.00958	0.936374	0.963872	
Benton	LEDD	74	-0.10806	0.359452	0.628522	
Benton	sum_walking_minutes	74	0.202089	0.084221	0.257485	
Benton	hourly_step_count_sum	74	0.303261	0.008627	0.05744	
Benton	sleep_efficiency	32	-0.21344	0.240826	0.525868	
Benton	num_awakenings	32	0.072994	0.691355	0.849525	
Benton	total_sleep_time_hour	32	0.23031	0.204754	0.481858	
Benton	wake_after_sleep_onset_hour	32	-0.06426	0.726791	0.870173	
Benton	total_nrem_time_hour	32	0.216074	0.234927	0.519805	

Benton	total_rem_time_hour	32	0.199851	0.272792	0.549034	
Benton	total_deep_nrem_time_hour	32	0.082548	0.653322	0.836754	
Benton	total_light_nrem_time_hour	32	0.206816	0.256077	0.536312	
Benton	hourly_mean_pulse_rate	74	-0.07828	0.507383	0.759364	
Benton	hourly_mean_rmssd	73	-0.111	0.349851	0.622996	
Benton	hourly_median_rmssd	73	-0.1116	0.347236	0.622008	
Benton	hourly_rmssd_variance	72	-0.03159	0.792235	0.890844	
Letter Number Sequencing	HVLT Recall	74	0.544284	5.37E-07	2.24E-05	*
Letter Number Sequencing	HVLT Recognition	73	0.120207	0.31106	0.590216	
Letter Number Sequencing	HVLT Retention	74	0.230183	0.048498	0.169998	
Letter Number Sequencing	Symbol Digit	74	0.565994	1.48E-07	8.2E-06	*
Letter Number Sequencing	STAI trait	74	-0.00881	0.940634	0.966763	
Letter Number Sequencing	STAI state	74	-0.05179	0.661221	0.843627	
Letter Number Sequencing	GDS	74	0.021176	0.857872	0.926543	
Letter Number Sequencing	QUIP	74	-0.11803	0.316553	0.594274	
Letter Number Sequencing	ESS	74	0.133973	0.25512	0.535993	
Letter Number Sequencing	RBDSQ	74	-0.10903	0.355117	0.625682	
Letter Number Sequencing	Systolic BP Drop	74	-0.22631	0.052512	0.178434	
Letter Number Sequencing	SCOPA autonome	74	-0.22749	0.051266	0.176908	
Letter Number Sequencing	Schwab England ADL	74	0.142407	0.226142	0.51228	
Letter Number Sequencing	UPDRS I	74	0.047375	0.68855	0.849525	
Letter Number Sequencing	UPDRS II	74	-0.31295	0.006631	0.04843	*
Letter Number Sequencing	UPDRS III OFF	70	-0.27886	0.019406	0.091928	
Letter Number Sequencing	UPDRS III ON	71	-0.34812	0.002931	0.026737	*
Letter Number Sequencing	UPDRS IV	72	-0.10631	0.37413	0.640542	
Letter Number Sequencing	LEDD	74	0.006958	0.953083	0.975043	
Letter Number Sequencing	sum_walking_minutes	74	0.327831	0.004353	0.035358	*
Letter Number Sequencing	hourly_step_count_sum	74	0.463868	3.15E-05	0.000635	*
Letter Number Sequencing	sleep_efficiency	32	0.193689	0.288155	0.564445	
Letter Number Sequencing	num_awakenings	32	-0.13378	0.465416	0.729716	
Letter Number Sequencing	total_sleep_time_hour	32	0.415825	0.017933	0.087821	
Letter Number Sequencing	wake_after_sleep_onset_hour	32	-0.52517	0.002027	0.019281	*
Letter Number Sequencing	total_nrem_time_hour	32	0.458151	0.008366	0.056853	
Letter Number Sequencing	total_rem_time_hour	32	0.198642	0.275763	0.549034	
Letter Number Sequencing	total_deep_nrem_time_hour	32	0.211616	0.244959	0.526267	
Letter Number Sequencing	total_light_nrem_time_hour	32	0.427836	0.01458	0.077681	
Letter Number Sequencing	hourly_mean_pulse_rate	74	0.272332	0.018907	0.09059	
Letter Number Sequencing	hourly_mean_rmssd	73	-0.05791	0.626478	0.820235	
Letter Number Sequencing	hourly_median_rmssd	73	-0.05544	0.641299	0.829331	
Letter Number Sequencing	hourly_rmssd_variance	72	0.029659	0.804667	0.890844	
HVLT Recall	HVLT Recognition	73	0.402225	0.000419	0.005944	*
HVLT Recall	HVLT Retention	74	0.524612	1.6E-06	5.09E-05	*
HVLT Recall	Symbol Digit	74	0.583809	4.77E-08	3.18E-06	*
HVLT Recall	STAI trait	74	-0.18224	0.120165	0.32934	
HVLT Recall	STAI state	74	-0.23122	0.04747	0.167275	
HVLT Recall	GDS	74	-0.12868	0.274538	0.549034	

HVLT Recall	QUIP	74	-0.03295	0.780499	0.890844	
HVLT Recall	ESS	74	0.04698	0.691018	0.849525	
HVLT Recall	RBDSQ	74	0.073164	0.535587	0.774157	
HVLT Recall	Systolic BP Drop	74	-0.26991	0.020036	0.093742	
HVLT Recall	SCOPA autonome	74	0.056578	0.632079	0.825421	
HVLT Recall	Schwab England ADL	74	0.01948	0.869151	0.932133	
HVLT Recall	UPDRS I	74	0.098843	0.402109	0.67119	
HVLT Recall	UPDRS II	74	-0.24185	0.037896	0.145051	
HVLT Recall	UPDRS III OFF	70	-0.36311	0.002005	0.019281	*
HVLT Recall	UPDRS III ON	71	-0.25536	0.031609	0.127632	
HVLT Recall	UPDRS IV	72	-0.06141	0.608325	0.811434	
HVLT Recall	LEDD	74	0.084649	0.473329	0.729716	
HVLT Recall	sum_walking_minutes	74	0.306423	0.007924	0.054409	
HVLT Recall	hourly_step_count_sum	74	0.299174	0.009615	0.061574	
HVLT Recall	sleep_efficiency	32	0.401262	0.022835	0.10276	
HVLT Recall	num_awakenings	32	0.211798	0.244543	0.526267	
HVLT Recall	total_sleep_time_hour	32	0.626706	0.000124	0.002068	*
HVLT Recall	wake_after_sleep_onset_hour	32	-0.19157	0.293566	0.568101	
HVLT Recall	total_nrem_time_hour	32	0.567645	0.000703	0.008669	*
HVLT Recall	total_rem_time_hour	32	0.592273	0.000355	0.005145	*
HVLT Recall	total_deep_nrem_time_hour	32	0.389123	0.027721	0.116114	
HVLT Recall	total_light_nrem_time_hour	32	0.493016	0.004144	0.034424	*
HVLT Recall	hourly_mean_pulse_rate	74	0.111313	0.345076	0.622008	
HVLT Recall	hourly_mean_rmssd	73	-0.27834	0.017107	0.084395	
HVLT Recall	hourly_median_rmssd	73	-0.28489	0.014569	0.077681	
HVLT Recall	hourly_rmssd_variance	72	-0.05413	0.651537	0.836727	
HVLT Recognition	HVLT Retention	73	0.235791	0.044618	0.15976	
HVLT Recognition	Symbol Digit	73	0.153755	0.194031	0.471622	
HVLT Recognition	STAI trait	73	-0.22582	0.054737	0.184116	
HVLT Recognition	STAI state	73	-0.29903	0.010173	0.062734	
HVLT Recognition	GDS	73	-0.2032	0.084673	0.2575	
HVLT Recognition	QUIP	73	0.15935	0.178107	0.446212	
HVLT Recognition	ESS	73	-0.1102	0.353345	0.624239	
HVLT Recognition	RBDSQ	73	0.012504	0.916379	0.958098	
HVLT Recognition	Systolic BP Drop	73	-0.06655	0.575904	0.799067	
HVLT Recognition	SCOPA autonome	73	0.093961	0.429119	0.702195	
HVLT Recognition	Schwab England ADL	73	0.03965	0.739096	0.878996	
HVLT Recognition	UPDRS I	73	-0.03237	0.785741	0.890844	
HVLT Recognition	UPDRS II	73	-0.04444	0.708879	0.859951	
HVLT Recognition	UPDRS III OFF	69	-0.09805	0.422853	0.695358	
HVLT Recognition	UPDRS III ON	70	0.020387	0.866967	0.931707	
HVLT Recognition	UPDRS IV	71	-0.06935	0.565519	0.791251	
HVLT Recognition	LEDD	73	-0.07756	0.514234	0.766174	
HVLT Recognition	sum_walking_minutes	73	-0.10472	0.377936	0.643748	
HVLT Recognition	hourly_step_count_sum	73	-0.00164	0.989027	0.992006	
HVLT Recognition	sleep_efficiency	31	0.074561	0.690165	0.849525	

HVLT Recognition	num_awakenings	31	0.26775	0.145323	0.382411	
HVLT Recognition	total_sleep_time_hour	31	0.403968	0.024209	0.106997	
HVLT Recognition	wake_after_sleep_onset_hour	31	0.042704	0.81957	0.902205	
HVLT Recognition	total_nrem_time_hour	31	0.370383	0.040261	0.149799	
HVLT Recognition	total_rem_time_hour	31	0.374739	0.037793	0.145051	
HVLT Recognition	total_deep_nrem_time_hour	31	0.247415	0.179625	0.4472	
HVLT Recognition	total_light_nrem_time_hour	31	0.318851	0.080414	0.25026	
HVLT Recognition	hourly_mean_pulse_rate	73	-0.01526	0.898055	0.944873	
HVLT Recognition	hourly_mean_rmssd	72	-0.16452	0.167275	0.428481	
HVLT Recognition	hourly_median_rmssd	72	-0.14042	0.2394	0.524475	
HVLT Recognition	hourly_rmssd_variance	71	-0.14781	0.218638	0.504271	
HVLT Retention	Symbol Digit	74	0.32594	0.004598	0.036454	*
HVLT Retention	STAI trait	74	-0.1936	0.098381	0.287375	
HVLT Retention	STAI state	74	-0.19553	0.095018	0.28001	
HVLT Retention	GDS	74	0.038102	0.747224	0.881017	
HVLT Retention	QUIP	74	-0.04427	0.707986	0.859951	
HVLT Retention	ESS	74	0.086353	0.464439	0.729716	
HVLT Retention	RBDSQ	74	-0.14031	0.233129	0.519278	
HVLT Retention	Systolic BP Drop	74	-0.19694	0.092599	0.276315	
HVLT Retention	SCOPA autonome	74	0.150327	0.201099	0.47836	
HVLT Retention	Schwab England ADL	74	0.01975	0.867355	0.931707	
HVLT Retention	UPDRS I	74	-0.01202	0.919066	0.958284	
HVLT Retention	UPDRS II	74	-0.10204	0.386992	0.652498	
HVLT Retention	UPDRS III OFF	70	-0.30766	0.009574	0.061574	
HVLT Retention	UPDRS III ON	71	-0.2073	0.08281	0.25533	
HVLT Retention	UPDRS IV	72	-0.28031	0.017082	0.084395	
HVLT Retention	LEDD	74	0.054327	0.645713	0.831808	
HVLT Retention	sum_walking_minutes	74	0.139949	0.23434	0.519805	
HVLT Retention	hourly_step_count_sum	74	0.177941	0.129323	0.350119	
HVLT Retention	sleep_efficiency	32	0.349082	0.050202	0.175051	
HVLT Retention	num_awakenings	32	0.057638	0.754023	0.881017	
HVLT Retention	total_sleep_time_hour	32	0.445992	0.010515	0.064247	
HVLT Retention	wake_after_sleep_onset_hour	32	-0.28866	0.109096	0.308872	
HVLT Retention	total_nrem_time_hour	32	0.449733	0.009809	0.062217	
HVLT Retention	total_rem_time_hour	32	0.312364	0.081763	0.253275	
HVLT Retention	total_deep_nrem_time_hour	32	0.006616	0.971334	0.98464	
HVLT Retention	total_light_nrem_time_hour	32	0.478709	0.005577	0.042694	*
HVLT Retention	hourly_mean_pulse_rate	74	-0.01038	0.930069	0.961842	
HVLT Retention	hourly_mean_rmssd	73	-0.29731	0.010637	0.064405	
HVLT Retention	hourly_median_rmssd	73	-0.29681	0.010775	0.06465	
HVLT Retention	hourly_rmssd_variance	72	-0.03069	0.798025	0.890844	
Symbol Digit	STAI trait	74	-0.11424	0.332474	0.604994	
Symbol Digit	STAI state	74	-0.21496	0.06588	0.215893	
Symbol Digit	GDS	74	0.035468	0.76417	0.883703	
Symbol Digit	QUIP	74	-0.02999	0.799791	0.890844	
Symbol Digit	ESS	74	0.146276	0.21365	0.499265	

Symbol Digit	RBDSQ	74	-0.14269	0.225218	0.51228	
Symbol Digit	Systolic BP Drop	74	-0.24083	0.038739	0.146593	
Symbol Digit	SCOPA autonome	74	-0.13692	0.244731	0.526267	
Symbol Digit	Schwab England ADL	74	0.129074	0.273069	0.549034	
Symbol Digit	UPDRS I	74	0.050701	0.667927	0.845703	
Symbol Digit	UPDRS II	74	-0.24505	0.03535	0.137678	
Symbol Digit	UPDRS III OFF	70	-0.39047	0.000832	0.0099	*
Symbol Digit	UPDRS III ON	71	-0.36443	0.001782	0.018254	*
Symbol Digit	UPDRS IV	72	-0.04881	0.683911	0.849525	
Symbol Digit	LEDD	74	-0.0095	0.935969	0.963872	
Symbol Digit	sum_walking_minutes	74	0.366247	0.001331	0.014297	*
Symbol Digit	hourly_step_count_sum	74	0.38578	0.000687	0.008639	*
Symbol Digit	sleep_efficiency	32	0.24182	0.182399	0.451591	
Symbol Digit	num_awakenings	32	-0.19462	0.285791	0.561465	
Symbol Digit	total_sleep_time_hour	32	0.422411	0.016023	0.084027	
Symbol Digit	wake_after_sleep_onset_hour	32	-0.42108	0.016394	0.084148	
Symbol Digit	total_nrem_time_hour	32	0.408944	0.020128	0.093742	
Symbol Digit	total_rem_time_hour	32	0.336402	0.059761	0.199005	
Symbol Digit	total_deep_nrem_time_hour	32	0.463539	0.00754	0.052858	
Symbol Digit	total_light_nrem_time_hour	32	0.301675	0.09335	0.276315	
Symbol Digit	hourly_mean_pulse_rate	74	0.163291	0.164493	0.426275	
Symbol Digit	hourly_mean_rmssd	73	-0.03197	0.788297	0.890844	
Symbol Digit	hourly_median_rmssd	73	-0.01759	0.882555	0.93745	
Symbol Digit	hourly_rmssd_variance	72	0.084163	0.482119	0.739842	
STAI trait	STAI state	75	0.7212	2.93E-13	2.79E-11	*
STAI trait	GDS	75	0.642249	5.28E-10	4.39E-08	*
STAI trait	QUIP	75	0.214372	0.064766	0.213535	
STAI trait	ESS	75	0.154242	0.186416	0.458128	
STAI trait	RBDSQ	75	0.109801	0.348362	0.622008	
STAI trait	Systolic BP Drop	75	0.180144	0.121965	0.332906	
STAI trait	SCOPA autonome	75	0.061195	0.60198	0.811434	
STAI trait	Schwab England ADL	75	-0.35199	0.001956	0.019281	*
STAI trait	UPDRS I	75	0.52761	1.15E-06	4.51E-05	*
STAI trait	UPDRS II	75	0.281342	0.014478	0.077681	
STAI trait	UPDRS III OFF	70	0.113034	0.351508	0.624239	
STAI trait	UPDRS III ON	72	0.008635	0.942608	0.967299	
STAI trait	UPDRS IV	73	0.355566	0.002021	0.019281	*
STAI trait	LEDD	75	-0.02992	0.79888	0.890844	
STAI trait	sum_walking_minutes	75	0.020955	0.858374	0.926543	
STAI trait	hourly_step_count_sum	75	-0.12635	0.280046	0.551806	
STAI trait	sleep_efficiency	33	0.120428	0.50441	0.756616	
STAI trait	num_awakenings	33	0.108647	0.547273	0.782154	
STAI trait	total_sleep_time_hour	33	-0.05503	0.761021	0.883703	
STAI trait	wake_after_sleep_onset_hour	33	0.121801	0.499525	0.75243	
STAI trait	total_nrem_time_hour	33	-0.04936	0.785033	0.890844	
STAI trait	total_rem_time_hour	33	-0.05327	0.768429	0.883871	

STAI trait	total_deep_nrem_time_hour	33	-0.05296	0.769737	0.883871	
STAI trait	total_light_nrem_time_hour	33	-0.03724	0.836988	0.913826	
STAI trait	hourly_mean_pulse_rate	75	0.04212	0.719746	0.865254	
STAI trait	hourly_mean_rmssd	74	0.129769	0.270473	0.549034	
STAI trait	hourly_median_rmssd	74	0.10375	0.379037	0.643976	
STAI trait	hourly_rmssd_variance	73	0.130672	0.270495	0.549034	
STAI state	GDS	75	0.568881	1.01E-07	6.11E-06	*
STAI state	QUIP	75	-0.0847	0.469993	0.729716	
STAI state	ESS	75	-0.00468	0.968227	0.98464	
STAI state	RBDSQ	75	0.149553	0.200325	0.47836	
STAI state	Systolic BP Drop	75	0.207331	0.074289	0.23338	
STAI state	SCOPA autonome	75	0.061098	0.602561	0.811434	
STAI state	Schwab England ADL	75	-0.36897	0.001124	0.012451	*
STAI state	UPDRS I	75	0.338008	0.003018	0.027162	*
STAI state	UPDRS II	75	0.236806	0.040801	0.150963	
STAI state	UPDRS III OFF	70	0.257169	0.031621	0.127632	
STAI state	UPDRS III ON	72	0.188855	0.112112	0.311111	
STAI state	UPDRS IV	73	0.305273	0.008633	0.05744	
STAI state	LEDD	75	-0.06752	0.564907	0.791251	
STAI state	sum_walking_minutes	75	-0.10996	0.347673	0.622008	
STAI state	hourly_step_count_sum	75	-0.23367	0.043626	0.157055	
STAI state	sleep_efficiency	33	0.162184	0.367194	0.635198	
STAI state	num_awakenings	33	0.286587	0.105887	0.303969	
STAI state	total_sleep_time_hour	33	-0.04504	0.803451	0.890844	
STAI state	wake_after_sleep_onset_hour	33	0.219905	0.21882	0.504271	
STAI state	total_nrem_time_hour	33	0.009591	0.957754	0.978319	
STAI state	total_rem_time_hour	33	-0.16165	0.368804	0.63633	
STAI state	total_deep_nrem_time_hour	33	-0.08882	0.623038	0.820046	
STAI state	total_light_nrem_time_hour	33	0.03601	0.842302	0.917175	
STAI state	hourly_mean_pulse_rate	75	0.068583	0.558776	0.789928	
STAI state	hourly_mean_rmssd	74	0.159704	0.17409	0.442535	
STAI state	hourly_median_rmssd	74	0.112428	0.340234	0.61575	
STAI state	hourly_rmssd_variance	73	0.083621	0.481832	0.739842	
GDS	QUIP	75	0.114536	0.327839	0.602213	
GDS	ESS	75	0.166251	0.154003	0.40222	
GDS	RBDSQ	75	0.193878	0.095576	0.280413	
GDS	Systolic BP Drop	75	0.156506	0.179954	0.4472	
GDS	SCOPA autonome	75	0.081526	0.486842	0.742027	
GDS	Schwab England ADL	75	-0.32954	0.003889	0.033204	*
GDS	UPDRS I	75	0.457906	3.62E-05	0.000708	*
GDS	UPDRS II	75	0.278436	0.015569	0.082293	
GDS	UPDRS III OFF	70	0.08735	0.472117	0.729716	
GDS	UPDRS III ON	72	-0.06192	0.605357	0.811434	
GDS	UPDRS IV	73	0.316834	0.006313	0.047244	*
GDS	LEDD	75	-0.06234	0.595189	0.810625	
GDS	sum_walking_minutes	75	0.037349	0.750388	0.881017	

GDS	hourly_step_count_sum	75	-0.09068	0.439121	0.710304
GDS	sleep_efficiency	33	0.119008	0.509487	0.760804
GDS	num_awakenings	33	0.070056	0.698462	0.853533
GDS	total_sleep_time_hour	33	-0.04584	0.800032	0.890844
GDS	wake_after_sleep_onset_hour	33	-0.06553	0.717127	0.863665
GDS	total_nrem_time_hour	33	-0.05307	0.769294	0.883871
GDS	total_rem_time_hour	33	-0.01616	0.928878	0.961842
GDS	total_deep_nrem_time_hour	33	-0.06278	0.72852	0.870173
GDS	total_light_nrem_time_hour	33	-0.03834	0.832222	0.912922
GDS	hourly_mean_pulse_rate	75	-0.03484	0.76664	0.883871
GDS	hourly_mean_rmssd	74	0.165346	0.159173	0.414099
GDS	hourly_median_rmssd	74	0.135486	0.249747	0.533113
GDS	hourly_rmssd_variance	73	0.130294	0.271895	0.549034
QUIP	ESS	75	0.113823	0.330878	0.603739
QUIP	RBDSQ	75	0.060423	0.606582	0.811434
QUIP	Systolic BP Drop	75	0.043203	0.712847	0.863193
QUIP	SCOPA autonome	75	0.110378	0.345818	0.622008
QUIP	Schwab England ADL	75	-0.02247	0.848252	0.920091
QUIP	UPDRS I	75	0.249044	0.03119	0.127441
QUIP	UPDRS II	75	0.148825	0.202549	0.47836
QUIP	UPDRS III OFF	70	-0.09411	0.438395	0.710304
QUIP	UPDRS III ON	72	0.068974	0.564812	0.791251
QUIP	UPDRS IV	73	0.093741	0.430207	0.702249
QUIP	LEDD	75	0.000728	0.995055	0.995055
QUIP	sum_walking_minutes	75	0.092798	0.428439	0.702195
QUIP	hourly_step_count_sum	75	0.03852	0.742826	0.881017
QUIP	sleep_efficiency	33	-0.01642	0.927715	0.961842
QUIP	num_awakenings	33	-0.01819	0.919974	0.958284
QUIP	total_sleep_time_hour	33	0.037749	0.834789	0.912922
QUIP	wake_after_sleep_onset_hour	33	-0.06621	0.714283	0.863362
QUIP	total_nrem_time_hour	33	-0.04033	0.823665	0.905217
QUIP	total_rem_time_hour	33	0.211729	0.236864	0.522355
QUIP	total_deep_nrem_time_hour	33	0.282812	0.11077	0.30997
QUIP	total_light_nrem_time_hour	33	-0.12509	0.487912	0.742027
QUIP	hourly_mean_pulse_rate	75	0.005745	0.960987	0.980119
QUIP	hourly_mean_rmssd	74	-0.21125	0.070806	0.22563
QUIP	hourly_median_rmssd	74	-0.16231	0.167081	0.428481
QUIP	hourly_rmssd_variance	73	0.049888	0.675108	0.84798
ESS	RBDSQ	75	0.14019	0.230287	0.518146
ESS	Systolic BP Drop	75	0.114707	0.327111	0.602213
ESS	SCOPA autonome	75	0.119268	0.308116	0.5867
ESS	Schwab England ADL	75	-0.03376	0.773694	0.886885
ESS	UPDRS I	75	0.419289	0.000181	0.002869 *
ESS	UPDRS II	75	0.276275	0.016425	0.084148
ESS	UPDRS III OFF	70	0.122226	0.313458	0.593077
ESS	UPDRS III ON	72	0.065698	0.583483	0.803773

ESS	UPDRS IV	73	0.100094	0.399472	0.670147	
ESS	LEDD	75	0.076028	0.516788	0.76826	
ESS	sum_walking_minutes	75	0.412247	0.000238	0.003683	*
ESS	hourly_step_count_sum	75	0.313678	0.006136	0.046437	*
ESS	sleep_efficiency	33	0.318098	0.071222	0.225876	
ESS	num_awakenings	33	-0.11497	0.524067	0.770548	
ESS	total_sleep_time_hour	33	0.006989	0.969211	0.98464	
ESS	wake_after_sleep_onset_hour	33	-0.13581	0.451109	0.718752	
ESS	total_nrem_time_hour	33	0.006605	0.970899	0.98464	
ESS	total_rem_time_hour	33	0.005971	0.973692	0.98553	
ESS	total_deep_nrem_time_hour	33	0.085071	0.637848	0.827803	
ESS	total_light_nrem_time_hour	33	-0.01766	0.922313	0.958284	
ESS	hourly_mean_pulse_rate	75	0.258814	0.024955	0.107226	
ESS	hourly_mean_rmssd	74	-0.10693	0.364507	0.633471	
ESS	hourly_median_rmssd	74	-0.08529	0.469964	0.729716	
ESS	hourly_rmssd_variance	73	-0.08011	0.50049	0.75243	
RBDSQ	Systolic BP Drop	75	0.258057	0.025397	0.108425	
RBDSQ	SCOPA autonome	75	0.513662	2.44E-06	6.77E-05	*
RBDSQ	Schwab England ADL	75	-0.17558	0.131875	0.354148	
RBDSQ	UPDRS I	75	0.431353	0.000112	0.001907	*
RBDSQ	UPDRS II	75	0.379238	0.000792	0.009596	*
RBDSQ	UPDRS III OFF	70	0.311054	0.008768	0.05744	
RBDSQ	UPDRS III ON	72	0.228491	0.053545	0.18102	
RBDSQ	UPDRS IV	73	0.499159	6.95E-06	0.000154	*
RBDSQ	LEDD	75	0.071846	0.540177	0.777015	
RBDSQ	sum_walking_minutes	75	0.115126	0.325339	0.602213	
RBDSQ	hourly_step_count_sum	75	0.030652	0.794051	0.890844	
RBDSQ	sleep_efficiency	33	0.035574	0.844187	0.917175	
RBDSQ	num_awakenings	33	0.41404	0.016603	0.084395	
RBDSQ	total_sleep_time_hour	33	0.035775	0.843319	0.917175	
RBDSQ	wake_after_sleep_onset_hour	33	0.404768	0.019462	0.091928	
RBDSQ	total_nrem_time_hour	33	-0.03796	0.833878	0.912922	
RBDSQ	total_rem_time_hour	33	0.200041	0.26435	0.546885	
RBDSQ	total_deep_nrem_time_hour	33	-0.20076	0.262604	0.546544	
RBDSQ	total_light_nrem_time_hour	33	0.017816	0.921609	0.958284	
RBDSQ	hourly_mean_pulse_rate	75	0.044341	0.705625	0.859134	
RBDSQ	hourly_mean_rmssd	74	-0.03088	0.793985	0.890844	
RBDSQ	hourly_median_rmssd	74	0.000772	0.99479	0.995055	
RBDSQ	hourly_rmssd_variance	73	-0.13135	0.267993	0.549034	
Systolic BP Drop	SCOPA autonome	75	0.069483	0.553614	0.786156	
Systolic BP Drop	Schwab England ADL	84	-0.14415	0.190794	0.465454	
Systolic BP Drop	UPDRS I	84	0.134763	0.221631	0.507239	
Systolic BP Drop	UPDRS II	84	0.288185	0.007853	0.054409	
Systolic BP Drop	UPDRS III OFF	71	0.328409	0.005172	0.040054	*
Systolic BP Drop	UPDRS III ON	80	0.286012	0.010115	0.062734	
Systolic BP Drop	UPDRS IV	82	0.080418	0.472634	0.729716	

Systolic BP Drop	LEDD	84	0.068556	0.535493	0.774157	
Systolic BP Drop	sum_walking_minutes	84	-0.13486	0.221295	0.507239	
Systolic BP Drop	hourly_step_count_sum	84	-0.18436	0.093185	0.276315	
Systolic BP Drop	sleep_efficiency	36	-0.1794	0.29514	0.568101	
Systolic BP Drop	num_awakenings	36	-0.02383	0.890286	0.941371	
Systolic BP Drop	total_sleep_time_hour	36	-0.26405	0.119673	0.32934	
Systolic BP Drop	wake_after_sleep_onset_hour	36	0.217563	0.202436	0.47836	
Systolic BP Drop	total_nrem_time_hour	36	-0.29173	0.084282	0.257485	
Systolic BP Drop	total_rem_time_hour	36	-0.08994	0.601922	0.811434	
Systolic BP Drop	total_deep_nrem_time_hour	36	-0.10161	0.555395	0.787006	
Systolic BP Drop	total_light_nrem_time_hour	36	-0.27132	0.10945	0.308872	
Systolic BP Drop	hourly_mean_pulse_rate	84	-0.08248	0.455752	0.72189	
Systolic BP Drop	hourly_mean_rmssd	83	-0.01463	0.895561	0.94374	
Systolic BP Drop	hourly_median_rmssd	83	-0.03457	0.756365	0.882205	
Systolic BP Drop	hourly_rmssd_variance	82	0.121452	0.277064	0.549034	
SCOPA autonome	Schwab England ADL	75	-0.30713	0.007357	0.052127	
SCOPA autonome	UPDRS I	75	0.435652	9.36E-05	0.001685	*
SCOPA autonome	UPDRS II	75	0.506357	3.57E-06	8.81E-05	*
SCOPA autonome	UPDRS III OFF	70	0.165156	0.171838	0.438484	
SCOPA autonome	UPDRS III ON	72	0.238631	0.043521	0.157055	
SCOPA autonome	UPDRS IV	73	0.391974	0.000605	0.008013	*
SCOPA autonome	LEDD	75	0.170666	0.143208	0.379985	
SCOPA autonome	sum_walking_minutes	75	0.07261	0.535865	0.774157	
SCOPA autonome	hourly_step_count_sum	75	-0.07574	0.518406	0.768568	
SCOPA autonome	sleep_efficiency	33	-0.04697	0.795219	0.890844	
SCOPA autonome	num_awakenings	33	0.435669	0.011269	0.066416	
SCOPA autonome	total_sleep_time_hour	33	-0.18645	0.298842	0.573571	
SCOPA autonome	wake_after_sleep_onset_hour	33	0.546748	0.000994	0.011413	*
SCOPA autonome	total_nrem_time_hour	33	-0.19954	0.265577	0.547597	
SCOPA autonome	total_rem_time_hour	33	-0.10424	0.563735	0.791251	
SCOPA autonome	total_deep_nrem_time_hour	33	-0.00518	0.977191	0.986679	
SCOPA autonome	total_light_nrem_time_hour	33	-0.21121	0.238047	0.523232	
SCOPA autonome	hourly_mean_pulse_rate	75	-0.0354	0.763038	0.883703	
SCOPA autonome	hourly_mean_rmssd	74	-0.05968	0.613515	0.811434	
SCOPA autonome	hourly_median_rmssd	74	-0.04955	0.675064	0.84798	
SCOPA autonome	hourly_rmssd_variance	73	-0.19389	0.100257	0.291577	
Schwab England ADL	UPDRS I	85	-0.29303	0.006496	0.048072	*
Schwab England ADL	UPDRS II	85	-0.5252	2.46E-07	1.17E-05	*
Schwab England ADL	UPDRS III OFF	71	-0.34474	0.003239	0.028758	*
Schwab England ADL	UPDRS III ON	81	-0.41721	0.000107	0.00187	*
Schwab England ADL	UPDRS IV	83	-0.38342	0.000346	0.005125	*
Schwab England ADL	LEDD	85	-0.09551	0.384567	0.650055	
Schwab England ADL	sum_walking_minutes	85	0.244635	0.024044	0.106997	
Schwab England ADL	hourly_step_count_sum	85	0.3641	0.000614	0.008013	*
Schwab England ADL	sleep_efficiency	36	-0.07065	0.682225	0.849525	
Schwab England ADL	num_awakenings	36	-0.19622	0.251403	0.53323	

Schwab England ADL	total_sleep_time_hour	36	0.356146	0.033013	0.130874	
Schwab England ADL	wake_after_sleep_onset_hour	36	-0.3029	0.072541	0.22897	
Schwab England ADL	total_nrem_time_hour	36	0.355742	0.033227	0.130941	
Schwab England ADL	total_rem_time_hour	36	0.21928	0.198808	0.47836	
Schwab England ADL	total_deep_nrem_time_hour	36	0.021336	0.901704	0.947216	
Schwab England ADL	total_light_nrem_time_hour	36	0.357047	0.032541	0.129774	
Schwab England ADL	hourly_mean_pulse_rate	85	-0.08314	0.449372	0.718752	
Schwab England ADL	hourly_mean_rmssd	84	0.01671	0.88008	0.93745	
Schwab England ADL	hourly_median_rmssd	84	0.088727	0.422209	0.695358	
Schwab England ADL	hourly_rmssd_variance	83	-0.13243	0.232682	0.519278	
UPDRS I	UPDRS II	85	0.482158	2.98E-06	7.93E-05	*
UPDRS I	UPDRS III OFF	71	0.159057	0.185203	0.456835	
UPDRS I	UPDRS III ON	81	0.04712	0.676151	0.84798	
UPDRS I	UPDRS IV	83	0.485663	3.26E-06	8.34E-05	*
UPDRS I	LEDD	85	0.088309	0.421576	0.695358	
UPDRS I	sum_walking_minutes	85	0.107865	0.325796	0.602213	
UPDRS I	hourly_step_count_sum	85	-0.02864	0.794712	0.890844	
UPDRS I	sleep_efficiency	36	0.197525	0.248194	0.531503	
UPDRS I	num_awakenings	36	0.01817	0.91623	0.958098	
UPDRS I	total_sleep_time_hour	36	0.003575	0.983491	0.987941	
UPDRS I	wake_after_sleep_onset_hour	36	0.139645	0.416626	0.690231	
UPDRS I	total_nrem_time_hour	36	-0.05462	0.751703	0.881017	
UPDRS I	total_rem_time_hour	36	0.153289	0.372089	0.640339	
UPDRS I	total_deep_nrem_time_hour	36	0.211768	0.215016	0.500703	
UPDRS I	total_light_nrem_time_hour	36	-0.10972	0.524111	0.770548	
UPDRS I	hourly_mean_pulse_rate	85	-0.05963	0.587744	0.803773	
UPDRS I	hourly_mean_rmssd	84	-0.05673	0.608248	0.811434	
UPDRS I	hourly_median_rmssd	84	-0.0575	0.603379	0.811434	
UPDRS I	hourly_rmssd_variance	83	-0.12258	0.269616	0.549034	
UPDRS II	UPDRS III OFF	71	0.530513	1.95E-06	5.64E-05	*
UPDRS II	UPDRS III ON	81	0.451262	2.36E-05	0.00049	*
UPDRS II	UPDRS IV	83	0.474471	5.86E-06	0.000134	*
UPDRS II	LEDD	85	0.101912	0.35336	0.624239	
UPDRS II	sum_walking_minutes	85	-0.10995	0.316467	0.594274	
UPDRS II	hourly_step_count_sum	85	-0.2547	0.018652	0.090014	
UPDRS II	sleep_efficiency	36	-0.05997	0.728254	0.870173	
UPDRS II	num_awakenings	36	0.143186	0.404788	0.673972	
UPDRS II	total_sleep_time_hour	36	-0.36534	0.028451	0.118426	
UPDRS II	wake_after_sleep_onset_hour	36	0.419054	0.010963	0.065188	
UPDRS II	total_nrem_time_hour	36	-0.42331	0.010098	0.062734	
UPDRS II	total_rem_time_hour	36	-0.07334	0.670796	0.846118	
UPDRS II	total_deep_nrem_time_hour	36	-0.1573	0.35956	0.628522	
UPDRS II	total_light_nrem_time_hour	36	-0.39119	0.018316	0.089039	
UPDRS II	hourly_mean_pulse_rate	85	0.120705	0.271158	0.549034	
UPDRS II	hourly_mean_rmssd	84	-0.12668	0.250873	0.53323	
UPDRS II	hourly_median_rmssd	84	-0.13247	0.229673	0.518146	

UPDRS II	hourly_rmssd_variance	83	-0.11072	0.319007	0.596794	
UPDRS III OFF	UPDRS III ON	67	0.835375	1.5E-18	2E-16	*
UPDRS III OFF	UPDRS IV	69	0.240909	0.046146	0.163888	
UPDRS III OFF	LEDD	71	0.00769	0.949254	0.97262	
UPDRS III OFF	sum_walking_minutes	71	-0.25165	0.034257	0.134205	
UPDRS III OFF	hourly_step_count_sum	71	-0.33401	0.004418	0.035447	*
UPDRS III OFF	sleep_efficiency	31	-0.29004	0.113484	0.313611	
UPDRS III OFF	num_awakenings	31	0.024741	0.894895	0.94374	
UPDRS III OFF	total_sleep_time_hour	31	-0.39134	0.029479	0.121942	
UPDRS III OFF	wake_after_sleep_onset_hour	31	0.215544	0.244208	0.526267	
UPDRS III OFF	total_nrem_time_hour	31	-0.42609	0.016844	0.084395	
UPDRS III OFF	total_rem_time_hour	31	-0.20118	0.277815	0.549034	
UPDRS III OFF	total_deep_nrem_time_hour	31	-0.31343	0.085986	0.259126	
UPDRS III OFF	total_light_nrem_time_hour	31	-0.3678	0.041785	0.15375	
UPDRS III OFF	hourly_mean_pulse_rate	71	0.092183	0.444516	0.715091	
UPDRS III OFF	hourly_mean_rmssd	71	-0.01666	0.890347	0.941371	
UPDRS III OFF	hourly_median_rmssd	71	-0.06146	0.610616	0.811434	
UPDRS III OFF	hourly_rmssd_variance	70	0.091641	0.450542	0.718752	
UPDRS III ON	UPDRS IV	80	0.139887	0.215869	0.500935	
UPDRS III ON	LEDD	81	0.044194	0.695239	0.852724	
UPDRS III ON	sum_walking_minutes	81	-0.27912	0.011622	0.067221	
UPDRS III ON	hourly_step_count_sum	81	-0.35652	0.001087	0.012274	*
UPDRS III ON	sleep_efficiency	34	-0.28168	0.106556	0.304485	
UPDRS III ON	num_awakenings	34	0.144024	0.416429	0.690231	
UPDRS III ON	total_sleep_time_hour	34	-0.16295	0.357147	0.627599	
UPDRS III ON	wake_after_sleep_onset_hour	34	0.21083	0.231357	0.518801	
UPDRS III ON	total_nrem_time_hour	34	-0.1371	0.439407	0.710304	
UPDRS III ON	total_rem_time_hour	34	-0.14895	0.400485	0.670159	
UPDRS III ON	total_deep_nrem_time_hour	34	-0.02023	0.90957	0.953974	
UPDRS III ON	total_light_nrem_time_hour	34	-0.12917	0.466587	0.729716	
UPDRS III ON	hourly_mean_pulse_rate	81	0.002723	0.980753	0.986679	
UPDRS III ON	hourly_mean_rmssd	80	0.051187	0.652044	0.836727	
UPDRS III ON	hourly_median_rmssd	80	0.027997	0.805277	0.890844	
UPDRS III ON	hourly_rmssd_variance	79	-0.05761	0.614058	0.811434	
UPDRS IV	LEDD	83	0.19974	0.070233	0.224879	
UPDRS IV	sum_walking_minutes	83	0.066643	0.549434	0.783562	
UPDRS IV	hourly_step_count_sum	83	-0.04048	0.716331	0.863665	
UPDRS IV	sleep_efficiency	36	0.167188	0.329754	0.603341	
UPDRS IV	num_awakenings	36	0.38023	0.022164	0.100418	
UPDRS IV	total_sleep_time_hour	36	-0.05416	0.75374	0.881017	
UPDRS IV	wake_after_sleep_onset_hour	36	0.493341	0.002233	0.020946	*
UPDRS IV	total_nrem_time_hour	36	-0.10866	0.528171	0.773103	
UPDRS IV	total_rem_time_hour	36	0.108312	0.529486	0.773328	
UPDRS IV	total_deep_nrem_time_hour	36	-0.06691	0.698204	0.853533	
UPDRS IV	total_light_nrem_time_hour	36	-0.09364	0.587004	0.803773	
UPDRS IV	hourly_mean_pulse_rate	83	-0.10989	0.322671	0.601957	

UPDRS IV	hourly_mean_rmssd	82	0.254034	0.02128	0.097741	
UPDRS IV	hourly_median_rmssd	82	0.252581	0.022058	0.100418	
UPDRS IV	hourly_rmssd_variance	81	0.048509	0.667161	0.845703	
LEDD	sum_walking_minutes	85	0.115091	0.294242	0.568101	
LEDD	hourly_step_count_sum	85	0.046833	0.670387	0.846118	
LEDD	sleep_efficiency	36	0.09645	0.575764	0.799067	
LEDD	num_awakenings	36	0.107591	0.532246	0.774157	
LEDD	total_sleep_time_hour	36	0.04679	0.786404	0.890844	
LEDD	wake_after_sleep_onset_hour	36	0.079785	0.643686	0.830803	
LEDD	total_nrem_time_hour	36	0.069222	0.688304	0.849525	
LEDD	total_rem_time_hour	36	-0.02957	0.864068	0.93118	
LEDD	total_deep_nrem_time_hour	36	-0.09363	0.587025	0.803773	
LEDD	total_light_nrem_time_hour	36	0.09444	0.583783	0.803773	
LEDD	hourly_mean_pulse_rate	85	-0.02695	0.806575	0.890844	
LEDD	hourly_mean_rmssd	84	0.068548	0.535542	0.774157	
LEDD	hourly_median_rmssd	84	0.057944	0.600594	0.811434	
LEDD	hourly_rmssd_variance	83	-0.04457	0.689091	0.849525	
sum_walking_minutes	hourly_step_count_sum	85	0.860102	5.52E-26	1.84E-23	*
sum_walking_minutes	sleep_efficiency	36	0.44389	0.00669	0.04843	*
sum_walking_minutes	num_awakenings	36	0.023784	0.890486	0.941371	
sum_walking_minutes	total_sleep_time_hour	36	0.373928	0.024667	0.106997	
sum_walking_minutes	wake_after_sleep_onset_hour	36	-0.14611	0.395159	0.664586	
sum_walking_minutes	total_nrem_time_hour	36	0.415777	0.01167	0.067221	
sum_walking_minutes	total_rem_time_hour	36	0.12047	0.48401	0.741036	
sum_walking_minutes	total_deep_nrem_time_hour	36	0.031581	0.854922	0.925818	
sum_walking_minutes	total_light_nrem_time_hour	36	0.415606	0.011708	0.067221	
sum_walking_minutes	hourly_mean_pulse_rate	85	0.223679	0.039606	0.14819	
sum_walking_minutes	hourly_mean_rmssd	84	0.133569	0.225792	0.51228	
sum_walking_minutes	hourly_median_rmssd	84	0.149065	0.175958	0.443893	
sum_walking_minutes	hourly_rmssd_variance	83	0.035744	0.748357	0.881017	
hourly_step_count_sum	sleep_efficiency	36	0.320028	0.057069	0.190993	
hourly_step_count_sum	num_awakenings	36	-0.12816	0.45633	0.72189	
hourly_step_count_sum	total_sleep_time_hour	36	0.339985	0.042479	0.154755	
hourly_step_count_sum	wake_after_sleep_onset_hour	36	-0.30702	0.068551	0.220556	
hourly_step_count_sum	total_nrem_time_hour	36	0.345606	0.038965	0.146614	
hourly_step_count_sum	total_rem_time_hour	36	0.193733	0.257575	0.537759	
hourly_step_count_sum	total_deep_nrem_time_hour	36	0.047982	0.781095	0.890844	
hourly_step_count_sum	total_light_nrem_time_hour	36	0.339916	0.042523	0.154755	
hourly_step_count_sum	hourly_mean_pulse_rate	85	0.202555	0.063008	0.208773	
hourly_step_count_sum	hourly_mean_rmssd	84	0.126203	0.252657	0.533677	
hourly_step_count_sum	hourly_median_rmssd	84	0.149345	0.175137	0.443502	
hourly_step_count_sum	hourly_rmssd_variance	83	0.056524	0.611767	0.811434	
sleep_efficiency	num_awakenings	36	0.285675	0.091227	0.27368	
sleep_efficiency	total_sleep_time_hour	36	0.742396	2.18E-07	1.12E-05	*
sleep_efficiency	wake_after_sleep_onset_hour	36	-0.02578	0.881369	0.93745	
sleep_efficiency	total_nrem_time_hour	36	0.706311	1.48E-06	4.94E-05	*

sleep_efficiency	total_rem_time_hour	36	0.5486	0.000532	0.007376	*
sleep_efficiency	total_deep_nrem_time_hour	36	0.213475	0.211257	0.495413	
sleep_efficiency	total_light_nrem_time_hour	36	0.665217	9.59E-06	0.000206	*
sleep_efficiency	hourly_mean_pulse_rate	36	0.046089	0.789535	0.890844	
sleep_efficiency	hourly_mean_rmssd	36	0.086353	0.616531	0.813089	
sleep_efficiency	hourly_median_rmssd	36	0.096794	0.574395	0.799067	
sleep_efficiency	hourly_rmssd_variance	35	0.099066	0.571261	0.797609	
num_awakenings	total_sleep_time_hour	36	0.350929	0.035859	0.13885	
num_awakenings	wake_after_sleep_onset_hour	36	0.575084	0.000244	0.003688	*
num_awakenings	total_nrem_time_hour	36	0.395049	0.0171	0.084395	
num_awakenings	total_rem_time_hour	36	0.100482	0.559829	0.789928	
num_awakenings	total_deep_nrem_time_hour	36	-0.14938	0.384548	0.650055	
num_awakenings	total_light_nrem_time_hour	36	0.440683	0.007145	0.051168	
num_awakenings	hourly_mean_pulse_rate	36	-0.07011	0.684516	0.849525	
num_awakenings	hourly_mean_rmssd	36	0.075118	0.663261	0.843729	
num_awakenings	hourly_median_rmssd	36	0.102755	0.550937	0.784026	
num_awakenings	hourly_rmssd_variance	35	-0.18221	0.294812	0.568101	
total_sleep_time_hour	wake_after_sleep_onset_hour	36	-0.15278	0.373696	0.640542	
total_sleep_time_hour	total_nrem_time_hour	36	0.962523	7.59E-21	1.26E-18	*
total_sleep_time_hour	total_rem_time_hour	36	0.710063	1.23E-06	4.56E-05	*
total_sleep_time_hour	total_deep_nrem_time_hour	36	0.275712	0.103607	0.29871	
total_sleep_time_hour	total_light_nrem_time_hour	36	0.910404	1.38E-14	1.53E-12	*
total_sleep_time_hour	hourly_mean_pulse_rate	36	-0.10566	0.539691	0.777015	
total_sleep_time_hour	hourly_mean_rmssd	36	0.151682	0.377184	0.643748	
total_sleep_time_hour	hourly_median_rmssd	36	0.174644	0.308326	0.5867	
total_sleep_time_hour	hourly_rmssd_variance	35	-0.13444	0.441301	0.711638	
wake_after_sleep_onset_hour	total_nrem_time_hour	36	-0.10408	0.545794	0.781718	
wake_after_sleep_onset_hour	total_rem_time_hour	36	-0.22007	0.197157	0.477479	
wake_after_sleep_onset_hour	total_deep_nrem_time_hour	36	-0.3975	0.016364	0.084148	
wake_after_sleep_onset_hour	total_light_nrem_time_hour	36	-0.00457	0.978883	0.986679	
wake_after_sleep_onset_hour	hourly_mean_pulse_rate	36	-0.19103	0.26441	0.546885	
wake_after_sleep_onset_hour	hourly_mean_rmssd	36	0.071787	0.677365	0.84798	
wake_after_sleep_onset_hour	hourly_median_rmssd	36	0.110988	0.519303	0.768568	
wake_after_sleep_onset_hour	hourly_rmssd_variance	35	-0.05616	0.748636	0.881017	
total_nrem_time_hour	total_rem_time_hour	36	0.49249	0.002279	0.021078	*
total_nrem_time_hour	total_deep_nrem_time_hour	36	0.198924	0.244792	0.526267	
total_nrem_time_hour	total_light_nrem_time_hour	36	0.968196	4.87E-22	1.08E-19	*
total_nrem_time_hour	hourly_mean_pulse_rate	36	-0.08094	0.638875	0.827803	
total_nrem_time_hour	hourly_mean_rmssd	36	0.229469	0.178217	0.446212	
total_nrem_time_hour	hourly_median_rmssd	36	0.247339	0.145844	0.382411	
total_nrem_time_hour	hourly_rmssd_variance	35	-0.11821	0.498855	0.75243	
total_rem_time_hour	total_deep_nrem_time_hour	36	0.368318	0.027087	0.114175	
total_rem_time_hour	total_light_nrem_time_hour	36	0.407808	0.013554	0.075223	
total_rem_time_hour	hourly_mean_pulse_rate	36	-0.12891	0.45367	0.721107	
total_rem_time_hour	hourly_mean_rmssd	36	-0.10902	0.52678	0.772766	
total_rem_time_hour	hourly_median_rmssd	36	-0.08173	0.635598	0.826775	

total_rem_time_hour	hourly_rmssd_variance	35	-0.12607	0.470515	0.729716
total_deep_nrem_time_hour	total_light_nrem_time_hour	36	-0.0526	0.760629	0.883703
total_deep_nrem_time_hour	hourly_mean_pulse_rate	36	-0.02649	0.878137	0.93745
total_deep_nrem_time_hour	hourly_mean_rmssd	36	-0.05429	0.753155	0.881017
total_deep_nrem_time_hour	hourly_median_rmssd	36	-0.02732	0.874344	0.936195
total_deep_nrem_time_hour	hourly_rmssd_variance	35	-0.05733	0.743589	0.881017
total_light_nrem_time_hour	hourly_mean_pulse_rate	36	-0.07571	0.660744	0.843627
total_light_nrem_time_hour	hourly_mean_rmssd	36	0.247684	0.145265	0.382411
total_light_nrem_time_hour	hourly_median_rmssd	36	0.259007	0.127169	0.345691
total_light_nrem_time_hour	hourly_rmssd_variance	35	-0.10658	0.542263	0.778335
hourly_mean_pulse_rate	hourly_mean_rmssd	84	-0.21289	0.051858	0.177419
hourly_mean_pulse_rate	hourly_median_rmssd	84	-0.1949	0.075634	0.236489
hourly_mean_pulse_rate	hourly_rmssd_variance	83	0.080936	0.466999	0.729716
hourly_mean_rmssd	hourly_median_rmssd	84	0.981818	5.98E-61	3.98E-58 *
hourly_mean_rmssd	hourly_rmssd_variance	83	0.246391	0.024741	0.106997
hourly_median_rmssd	hourly_rmssd_variance	83	0.176002	0.111478	0.310646

Supplemental Table 3: Performance of digital weekly averages predicting clinical assessments

Results of the predictive modelling of clinical scores from digital weekly averages. For each clinical score the baseline R2 performance and the performance of the model using the digital markers as features are shown as mean R2 and standard deviation. The results of the two-sided T-test comparing the 5-fold cross-validation R2 performances between baseline and fitted model are shown with the t statistic and the associated p-value.

	T	dof	alternative	p-value	CI	cohen-d	BF10	power	sign	mean R2	std R2	baseline mean R2	baseline std R2
updrs_ii	4.566502	8	two-sided	0.001834	[0.05 0.16]	2.888109	17.344	0.977874	*	0.052973	0.022328	-0.05163	0.040002
updrs_iii_OFF	0.505877	8	two-sided	0.626585	[-0.15 0.23]	0.319945	0.533	0.073301		-0.06832	0.113608	-0.10964	0.117366
semantic_fluency	0.40614	8	two-sided	0.695286	[-0.13 0.19]	0.256866	0.519	0.06496		0.118057	0.110473	0.089288	0.08869
moca	0.156266	8	two-sided	0.879695	[-0.08 0.09]	0.098831	0.496	0.0522		-0.0099	0.031966	-0.01557	0.065086
benton	0.117451	8	two-sided	0.909398	[-0.27 0.29]	0.074283	0.495	0.051242		-0.29576	0.171833	-0.30998	0.170644
Ins	1.696765	8	two-sided	0.128179	[-0.01 0.09]	1.073128	1.086	0.321514		0.076919	0.042837	0.036734	0.020215
hvlr_recall	1.349826	8	two-sided	0.21402	[-0.05 0.2]	0.853705	0.832	0.222007		-0.07342	0.0777	-0.14752	0.077559
hvlr_recognition	-0.16991	8	two-sided	0.869303	[-0.1 0.08]	0.107457	0.497	0.052602		-0.11071	0.053449	-0.10417	0.055502
hvlr_retention	0.741629	8	two-sided	0.479515	[-0.17 0.33]	0.469048	0.583	0.10064		-0.17287	0.100905	-0.25354	0.192728
symbol_digit	-0.19545	8	two-sided	0.849914	[-0.29 0.24]	0.123613	0.498	0.053444		-0.15414	0.171061	-0.13166	0.153899
stai_trait	-0.04991	8	two-sided	0.961414	[-0.13 0.13]	0.031569	0.493	0.050224		-0.09327	0.082201	-0.09045	0.077069
stai_state	0.175233	8	two-sided	0.865251	[-0.23 0.27]	0.110827	0.497	0.052768		-0.126	0.139052	-0.14482	0.163668

gds	0	8	two-sided	1	[-0.08 0.08]	0	0.492	0.05	-0.11166	0.051324	-0.11166	0.051324
quip	-0.22617	8	two-sided	0.826741	[0.28] [0.05]	0.143042	0.5	0.054615	-0.18318	0.194604	-0.15266	0.187054
epworth	4.537698	8	two-sided	0.001905	0.14] [-0.15]	2.869892	16.866	0.976548 *	-0.00021	0.03146	-0.09265	0.025892
rbd	-0.07926	8	two-sided	0.938776	0.14] [-0.11]	0.050125	0.493	0.050565	-0.06457	0.087226	-0.05958	0.090931
systolic_bp_drop	0.021092	8	two-sided	0.983689	0.11] [-0.19]	0.01334	0.492	0.05004	-0.00952	0.071395	-0.01053	0.063237
scopa_aut	0.136293	8	two-sided	0.894957	0.21] [-0.02]	0.086199	0.495	0.051673	-0.15211	0.12849	-0.16401	0.118251
se_adl	1.868912	8	two-sided	0.098572	0.16] [-0.07]	1.182004	1.255	0.376983	-0.09863	0.059547	-0.17237	0.051792
updrs_i	0	8	two-sided	1	0.07] [-0.18]	0	0.492	0.05	-0.06818	0.041239	-0.06818	0.041239
LEDD	-0.3386	8	two-sided	0.743627	0.14] [-0.08]	0.214149	0.51	0.060374	-0.15819	0.105542	-0.13481	0.089034
updrs_iii_ON	1.109388	8	two-sided	0.299495	0.22] [-0.42]	0.701639	0.709	0.165325	0.034923	0.117938	-0.03667	0.052421
updrs_iv	0.318007	8	two-sided	0.758622	0.55]	0.201125	0.508	0.059145	-0.18498	0.293981	-0.25223	0.304119

Supplemental Table 4: Amount of change between clinic visits

For each clinical measure and digital weekly average, the amount of change between visits is quantified with cohen's d, significance tests between visits are reported with two-sided t-tests.

feature	T	dof	alternative	p-val	CI95%	cohen-d	BF10	power	hedges g	category
semantic_fluency	-1.69002	21	two-sided	0.105816	[-7.81 0.81]	0.207066	0.757	0.152831	0.203346	clinical
moca	-0.81295	21	two-sided	0.425368	[-1.13 0.5]	0.12239	0.3	0.085082	0.120191	clinical
benton	-0.19558	21	two-sided	0.846819	[-0.53 0.44]	0.025273	0.227	0.05147	0.024819	clinical
lns	-1.17611	21	two-sided	0.252712	[-1.38 0.38]	0.190386	0.411	0.136541	0.186965	clinical
hvlr_recall	-3.35808	21	two-sided	0.002977	[-4.12 - 0.97]	0.440343	13.911	0.504282	0.432432	clinical

hvt_recognition	-0.28257	21	two-sided	0.78027	[-0.76 0.58]	0.031854	0.231	0.052336	0.031282	clinical
hvt_retention	0.608412	21	two-sided	0.549439	[-0.07 0.12]	0.114167	0.264	0.080461	0.112116	clinical
symbol_digit	-1.50966	21	two-sided	0.146031	[-3.03 0.48]	0.101085	0.598	0.073802	0.099269	clinical
stai_trait	-0.63983	22	two-sided	0.528893	[-1.84 0.97]	0.047186	0.263	0.055391	0.046377	clinical
stai_state	1.095844	22	two-sided	0.284999	[-0.78 2.52]	0.07656	0.373	0.064263	0.075247	clinical
gds	1.335223	22	two-sided	0.195456	[-0.24 1.11]	0.13639	0.479	0.095959	0.134052	clinical
quip	0	22	two-sided	1	[-0.26 0.26]	0	0.219	0.05	0	clinical
epworth	-0.17301	22	two-sided	0.864227	[-1.13 0.96]	0.020036	0.222	0.050969	0.019692	clinical
rbd	0.416404	22	two-sided	0.681149	[-0.87 1.3]	0.072792	0.237	0.062884	0.071544	clinical
systolic_bp_drop	-0.9351	34	two-sided	0.356331	[-19.31 7.14]	0.202009	0.272	0.213206	0.199773	clinical
scopa_aut	1.251711	22	two-sided	0.223821	[-0.49 1.96]	0.120661	0.437	0.08581	0.118593	clinical
se_adl	-1.4676	34	two-sided	0.151404	[-4.77 0.77]	0.183168	0.482	0.183563	0.181141	clinical
updrs_i	-1.13044	34	two-sided	0.266203	[-2.16 0.62]	0.137403	0.326	0.12401	0.135882	clinical
updrs_ii	0.804133	34	two-sided	0.426907	[-0.79 1.81]	0.080357	0.245	0.074801	0.079467	clinical
updrs_iii_OFF	-0.87999	21	two-sided	0.388824	[-3.97 1.61]	0.07718	0.315	0.063804	0.075794	clinical
updrs_iii_ON	1.118151	32	two-sided	0.271827	[-1.34 4.62]	0.140179	0.33	0.122329	0.13853	clinical
updrs_iv	1.168987	33	two-sided	0.250784	[-0.48 1.77]	0.203443	0.344	0.210464	0.201122	clinical
LEDD	3.176262	34	two-sided	0.003167	[58.68 267.17]	0.237338	11.513	0.276237	0.234711	clinical
sum_walking_minutes	-1.08132	34	two-sided	0.287163	[-0.91 0.28]	0.153788	0.311	0.143268	0.152086	digital
hourly_step_count_sum	-2.07429	34	two-sided	0.045693	[- 118.08 -1.21]	0.235175	1.212	0.272118	0.232572	digital
sleep_efficiency	1.23733	12	two-sided	0.23963	[-0.06 0.2]	0.314774	0.524	0.181647	0.304834	digital
num_awakenings	1.053825	12	two-sided	0.31272	[-0.73 2.1]	0.359827	0.444	0.222987	0.348464	digital
total_sleep_time_hour	1.048942	12	two-sided	0.314872	[-0.48 1.38]	0.358766	0.442	0.221952	0.347437	digital
wake_after_sleep_onset_hour	0.116099	12	two-sided	0.909494	[-0.28 0.31]	0.04405	0.28	0.052464	0.042659	digital
total_nrem_time_hour	0.677506	12	two-sided	0.510936	[-0.49 0.94]	0.195161	0.339	0.099461	0.188998	digital
total_rem_time_hour	1.785076	12	two-sided	0.099527	[-0.05 0.5]	0.626483	0.963	0.546441	0.606699	digital
total_deep_nrem_time_hour	1.903721	12	two-sided	0.0812	[-0.02 0.27]	0.397333	1.119	0.261402	0.384785	digital
total_light_nrem_time_hour	0.269314	12	two-sided	0.792263	[-0.69 0.88]	0.080628	0.287	0.058281	0.078082	digital

hourly_mean_pulse_rate	-0.59484	34	two-sided	0.555886	[-1.96 1.07]	0.037315	0.214	0.055292	0.036902	digital
hourly_mean_rmssd	1.075409	34	two-sided	0.289764	[-0.67 2.17]	0.19637	0.309	0.20403	0.194196	digital
hourly_median_rmssd	0.743684	34	two-sided	0.462176	[-0.88 1.9]	0.133669	0.234	0.119944	0.132189	digital
hourly_rmssd_variance	1.896054	32	two-sided	0.067014	[-0.57 15.94]	0.319005	0.915	0.427707	0.315252	digital

Supplemental Table 5: Association between rate of change between clinic visits

Results of the Pearson correlation analysis between the rate of change in clinical and in digital markers. The Pearson’s r coefficient, the associated p-value, the FDR corrected p-value, and the sample size is displayed.

f1	f2	N	pearson r	p-value
Semantic Fluency	Semantic Fluency			0.93506
Semantic Fluency	MOCA	10	-0.02971	4
Semantic Fluency	Benton	10	-0.08715	8
Semantic Fluency	Letter Number Sequencing	10	-0.19901	8
Semantic Fluency	HVLT Recall	10	0.43218	0.21227
Semantic Fluency	HVLT Recognition	10	1	6
Semantic Fluency	HVLT Retention	10	-0.20997	8
Semantic Fluency	Symbol Digit	10	-0.09308	6
Semantic Fluency	STAI trait	10	-0.1787	0.62133
Semantic Fluency	STAI state	10	0.15847	3
Semantic Fluency	GDS	10	-0.31079	9
Semantic Fluency	QUIP	10	0.22880	0.52488
Semantic Fluency	ESS	10	1	6
Semantic Fluency	RBDSQ	10	-0.15074	7
Semantic Fluency	Systolic BP Drop	10	-0.42505	7
Semantic Fluency		10	-0.59144	0.07171
Semantic Fluency		10	-0.27487	5
Semantic Fluency		10		0.44212
Semantic Fluency		10		9

				0.88898
Semantic Fluency	SCOPA autonome	10	0.05088	8
				0.41868
Semantic Fluency	Schwab England ADL	10	-0.2886	7
			0.14954	0.68009
Semantic Fluency	UPDRS I	10	2	5
			0.37017	0.29237
Semantic Fluency	UPDRS II	10	5	7
				0.30318
Semantic Fluency	UPDRS III OFF	8	-0.41767	5
				0.64849
Semantic Fluency	UPDRS III ON	10	-0.16512	2
			0.06294	0.86285
Semantic Fluency	UPDRS IV	10	2	9
Semantic Fluency	LEDD	9	-0.37688	0.31739
				0.65193
Semantic Fluency	sum_walking_minutes	10	-0.16341	9
			0.01020	
Semantic Fluency	hourly_step_count_sum	8	4	0.98087
Semantic Fluency	sleep_efficiency	1		
Semantic Fluency	num_awakenings	1		
Semantic Fluency	total_sleep_time_hour	1		
	wake_after_sleep_onset_hour			
Semantic Fluency	r	1		
Semantic Fluency	total_nrem_time_hour	1		
Semantic Fluency	total_rem_time_hour	1		
Semantic Fluency	total_deep_nrem_time_hour	1		
Semantic Fluency	total_light_nrem_time_hour	1		
				0.27834
Semantic Fluency	hourly_mean_pulse_rate	8	-0.4375	7
				0.21815
Semantic Fluency	hourly_mean_rmssd	7	-0.53285	8
				0.21076
Semantic Fluency	hourly_median_rmssd	7	-0.54009	5
Semantic Fluency	hourly_rmssd_variance	5	-0.73223	0.15948
MOCA	Semantic Fluency			
MOCA	MOCA			
				0.18701
MOCA	Benton	10	-0.45444	5
			0.35084	0.32021
MOCA	Letter Number Sequencing	10	9	9
			0.37681	0.28312
MOCA	HVLT Recall	10	1	8
			0.66898	0.03440
MOCA	HVLT Recognition	10	1	4
			0.65253	0.04083
MOCA	HVLT Retention	10	8	9
			0.82616	0.00322
MOCA	Symbol Digit	10	1	1

MOCA	STAI trait	10	-0.61691	4	0.05744
MOCA	STAI state	10	-0.74081	2	0.01424
MOCA	GDS	10	-0.12996	9	0.72045
MOCA	QUIP	10	-0.16611	8	0.64648
MOCA	ESS	10	0.49655	7	0.14431
MOCA	RBDSQ	10	2	5	0.99713
MOCA	Systolic BP Drop	10	-0.00131	5	0.26034
MOCA	SCOPA autonome	10	-0.39368	5	0.06639
MOCA	Schwab England ADL	10	5	7	0.8554
MOCA	UPDRS I	10	-0.15877	9	0.66130
MOCA	UPDRS II	10	0.57154	9	0.08433
MOCA	UPDRS III OFF	10	0.14960	9	0.67995
MOCA	UPDRS III ON	8	8	2	0.42784
MOCA	UPDRS IV	10	-0.3279	2	0.30013
MOCA	LEDD	9	-0.3647	9	0.56168
MOCA	sum_walking_minutes	10	0.20930	2	0.35302
MOCA	hourly_step_count_sum	8	0.35190	3	0.45156
MOCA	sleep_efficiency	1	-0.26944	3	0.51105
MOCA	num_awakenings	1	-0.27421	3	
MOCA	total_sleep_time_hour	1			
MOCA	wake_after_sleep_onset_hour	1			
MOCA	total_nrem_time_hour	1			
MOCA	total_rem_time_hour	1			
MOCA	total_deep_nrem_time_hour	1			
MOCA	total_light_nrem_time_hour	1			
MOCA	hourly_mean_pulse_rate	8	0.12869	5	0.76135
MOCA	hourly_mean_rmssd	7	1	5	0.17756
MOCA	hourly_median_rmssd	7	-0.57425	6	0.19767
MOCA	hourly_rmssd_variance	5	-0.55322	6	0.70611
MOCA		5	-0.23294	6	

Benton	Semantic Fluency			
Benton	MOCA			
Benton	Benton			
			0.38024	
Benton	Letter Number Sequencing	10	1	0.27841
				0.92148
Benton	HVLT Recall	10	-0.03594	9
				0.93308
Benton	HVLT Recognition	10	0.03062	1
Benton	HVLT Retention	10	-0.04206	0.90815
				0.28914
Benton	Symbol Digit	10	-0.37248	4
			0.22765	0.52701
Benton	STAI trait	10	9	5
			0.25394	0.47895
Benton	STAI state	10	2	9
				0.62990
Benton	GDS	10	-0.17439	5
			0.39503	0.25855
Benton	QUIP	10	7	3
				0.40964
Benton	ESS	10	-0.294	1
				0.30343
Benton	RBDSQ	10	-0.36239	1
				0.89373
Benton	Systolic BP Drop	10	-0.04869	4
Benton	SCOPA autonome	10	-0.68083	0.03022
			0.33584	0.34274
Benton	Schwab England ADL	10	6	4
				0.96381
Benton	UPDRS I	10	-0.01654	8
				0.27889
Benton	UPDRS II	10	-0.37989	6
			0.15465	0.71461
Benton	UPDRS III OFF	8	3	6
			0.80530	0.00493
Benton	UPDRS III ON	10	4	4
				0.15742
Benton	UPDRS IV	10	-0.48291	4
				0.83240
Benton	LEDD	9	-0.08274	4
			0.68486	0.02887
Benton	sum_walking_minutes	10	8	7
			0.14126	0.73862
Benton	hourly_step_count_sum	8	7	7
Benton	sleep_efficiency	1		
Benton	num_awakenings	1		
Benton	total_sleep_time_hour	1		
Benton	wake_after_sleep_onset_hour	1		

Benton	total_nrem_time_hour	1		
Benton	total_rem_time_hour	1		
Benton	total_deep_nrem_time_hour	1		
Benton	total_light_nrem_time_hour	1		
			0.08790	0.83602
Benton	hourly_mean_pulse_rate	8	3	9
			0.48979	0.26453
Benton	hourly_mean_rmssd	7	7	5
			0.40117	0.37239
Benton	hourly_median_rmssd	7	7	7
			0.00772	0.99016
Benton	hourly_rmssd_variance	5	3	6
Letter Number Sequencing	Semantic Fluency			
Letter Number Sequencing	MOCA			
Letter Number Sequencing	Benton			
Letter Number Sequencing	Letter Number Sequencing			
				0.94219
Letter Number Sequencing	HVLT Recall	10	-0.02644	3
			0.25499	0.47707
Letter Number Sequencing	HVLT Recognition	10	3	9
			0.32407	0.36096
Letter Number Sequencing	HVLT Retention	10	7	3
			0.54858	0.10057
Letter Number Sequencing	Symbol Digit	10	2	8
				0.40144
Letter Number Sequencing	STAI trait	10	-0.29894	7
				0.71549
Letter Number Sequencing	STAI state	10	-0.13236	2
				0.39153
Letter Number Sequencing	GDS	10	-0.30497	9
			0.10589	0.77093
Letter Number Sequencing	QUIP	10	4	6
				0.59383
Letter Number Sequencing	ESS	10	0.19267	4
				0.90041
Letter Number Sequencing	RBDSQ	10	-0.04562	1
Letter Number Sequencing	Systolic BP Drop	10	-0.35941	0.30772
Letter Number Sequencing	SCOPA autonome	10	-0.67134	0.03354
			0.38805	0.26782
Letter Number Sequencing	Schwab England ADL	10	4	4
			0.42982	0.21506
Letter Number Sequencing	UPDRS I	10	1	3
				0.42431
Letter Number Sequencing	UPDRS II	10	-0.28528	4
				0.17413
Letter Number Sequencing	UPDRS III OFF	8	-0.53262	1
			0.31605	0.37364
Letter Number Sequencing	UPDRS III ON	10	8	6
				0.03105
Letter Number Sequencing	UPDRS IV	10	-0.67839	3

Letter Number Sequencing	LEDD	9	-0.06796	0.86208	6
			0.32942	0.35262	
Letter Number Sequencing	sum_walking_minutes	10	2		9
			0.24907	0.55193	
Letter Number Sequencing	hourly_step_count_sum	8	7		7
Letter Number Sequencing	sleep_efficiency	1			
Letter Number Sequencing	num_awakenings	1			
Letter Number Sequencing	total_sleep_time_hour	1			
Letter Number Sequencing	wake_after_sleep_onset_hour	1			
Letter Number Sequencing	total_nrem_time_hour	1			
Letter Number Sequencing	total_rem_time_hour	1			
Letter Number Sequencing	total_deep_nrem_time_hour	1			
Letter Number Sequencing	total_light_nrem_time_hour	1			
Letter Number Sequencing	hourly_mean_pulse_rate	8	-0.30616	0.46082	
			0.20603		
Letter Number Sequencing	hourly_mean_rmssd	7	5	0.6576	
			0.12690		
Letter Number Sequencing	hourly_median_rmssd	7	5	0.78629	
			0.33046	0.58702	
Letter Number Sequencing	hourly_rmssd_variance	5	6		6
HVLT Recall	Semantic Fluency				
HVLT Recall	MOCA				
HVLT Recall	Benton				
HVLT Recall	Letter Number Sequencing				
HVLT Recall	HVLT Recall			0.21722	
HVLT Recall	HVLT Recognition	10	2	0.54662	
			0.60421	0.06430	
HVLT Recall	HVLT Retention	10	2		1
				0.82678	
HVLT Recall	Symbol Digit	10	0.07969		1
				0.09084	
HVLT Recall	STAI trait	10	-0.56203		2
				0.08628	
HVLT Recall	STAI state	10	-0.56865		6
				0.51819	
HVLT Recall	GDS	10	-0.2324		9
			0.04048	0.91158	
HVLT Recall	QUIP	10	7		1
				0.89325	
HVLT Recall	ESS	10	-0.04891		8
				0.14977	
HVLT Recall	RBDSQ	10	-0.49078		6
				0.01684	
HVLT Recall	Systolic BP Drop	10	-0.7286		6
			0.08080	0.82439	
HVLT Recall	SCOPA autonome	10	2		4

HVLT Recall	Schwab England ADL	10	-0.26114	9	0.46613
HVLT Recall	UPDRS I	10	0.22775	4	0.52684
HVLT Recall	UPDRS II	10	0.15655	7	0.66581
HVLT Recall	UPDRS III OFF	8	-0.1315	2	0.75627
HVLT Recall	UPDRS III ON	10	0.10120	6	0.78087
HVLT Recall	UPDRS IV	10	0.21519	6	0.55046
HVLT Recall	LEDD	9	0.07141	5	0.85513
HVLT Recall	sum_walking_minutes	10	0.19902	5	0.58147
HVLT Recall	hourly_step_count_sum	8	-0.16656	5	1
HVLT Recall	sleep_efficiency	1			0.69342
HVLT Recall	num_awakenings	1			
HVLT Recall	total_sleep_time_hour	1			
HVLT Recall	wake_after_sleep_onset_hour	1			
HVLT Recall	total_nrem_time_hour	1			
HVLT Recall	total_rem_time_hour	1			
HVLT Recall	total_deep_nrem_time_hour	1			
HVLT Recall	total_light_nrem_time_hour	1			
HVLT Recall	hourly_mean_pulse_rate	8	0.59949	1	0.11623
HVLT Recall	hourly_mean_rmssd	7	-0.18346	1	0.69376
HVLT Recall	hourly_median_rmssd	7	0.12823	5	0.80044
HVLT Recall	hourly_rmssd_variance	5	-0.11838	2	0.83717
HVLT Recognition	Semantic Fluency			2	9
HVLT Recognition	MOCA				
HVLT Recognition	Benton				
HVLT Recognition	Letter Number Sequencing				
HVLT Recognition	HVLT Recall				
HVLT Recognition	HVLT Recognition				
HVLT Recognition	HVLT Retention	10	0.68130	3	0.03006
HVLT Recognition	Symbol Digit	10	0.53030	1	0.11483
HVLT Recognition	STAI trait	10	-0.52761	1	0.11703
HVLT Recognition	STAI state	10	-0.69389	4	0.02602
				5	

HVLT Recognition	GDS	10	0.12298	0.73499
			8	7
			0.19721	0.58497
HVLT Recognition	QUIP	10	8	8
			0.42420	0.22177
HVLT Recognition	ESS	10	8	5
			0.00460	0.98992
HVLT Recognition	RBDSQ	10	7	2
			0.03245	0.92907
HVLT Recognition	Systolic BP Drop	10	7	5
				0.62482
HVLT Recognition	SCOPA autonome	10	-0.17695	4
				0.35666
HVLT Recognition	Schwab England ADL	10	-0.32682	9
			0.69738	0.02497
HVLT Recognition	UPDRS I	10	6	3
			0.36323	0.30221
HVLT Recognition	UPDRS II	10	8	7
			0.06728	0.87421
HVLT Recognition	UPDRS III OFF	8	6	9
			0.17666	0.62538
HVLT Recognition	UPDRS III ON	10	2	9
				0.59621
HVLT Recognition	UPDRS IV	10	0.19145	8
			0.38177	0.31062
HVLT Recognition	LEDD	9	8	9
				0.83578
HVLT Recognition	sum_walking_minutes	10	-0.0755	4
				0.08392
HVLT Recognition	hourly_step_count_sum	8	-0.6454	7
HVLT Recognition	sleep_efficiency	1		
HVLT Recognition	num_awakenings	1		
HVLT Recognition	total_sleep_time_hour	1		
HVLT Recognition	wake_after_sleep_onset_hour	1		
HVLT Recognition	total_nrem_time_hour	1		
HVLT Recognition	total_rem_time_hour	1		
HVLT Recognition	total_deep_nrem_time_hour	1		
HVLT Recognition	total_light_nrem_time_hour	1		
			0.51997	0.18652
HVLT Recognition	hourly_mean_pulse_rate	8	5	7
HVLT Recognition	hourly_mean_rmssd	7	-0.45637	0.30334
				0.31656
HVLT Recognition	hourly_median_rmssd	7	-0.44541	1
				0.62009
HVLT Recognition	hourly_rmssd_variance	5	-0.30308	5
HVLT Retention	Semantic Fluency			
HVLT Retention	MOCA			
HVLT Retention	Benton			
HVLT Retention	Letter Number Sequencing			

HVLT Retention	HVLT Recall			
HVLT Retention	HVLT Recognition			
HVLT Retention	HVLT Retention		0.33398	0.34559
HVLT Retention	Symbol Digit	10	2	7
				0.01398
HVLT Retention	STAI trait	10	-0.7421	4
				0.00407
HVLT Retention	STAI state	10	-0.81493	8
			0.05131	0.88805
HVLT Retention	GDS	10	1	2
			0.33348	0.34635
HVLT Retention	QUIP	10	7	7
			0.52024	0.12317
HVLT Retention	ESS	10	9	9
			0.06819	
HVLT Retention	RBDSQ	10	3	0.85152
				0.37712
HVLT Retention	Systolic BP Drop	10	-0.31388	9
			0.15055	0.67803
HVLT Retention	SCOPA autonome	10	1	4
				0.44308
HVLT Retention	Schwab England ADL	10	-0.27432	8
			0.74540	
HVLT Retention	UPDRS I	10	2	0.01334
			0.30067	0.39857
HVLT Retention	UPDRS II	10	6	8
				0.63642
HVLT Retention	UPDRS III OFF	8	-0.19911	2
HVLT Retention	UPDRS III ON	10	-0.01578	0.96548
			0.20965	0.56100
HVLT Retention	UPDRS IV	10	9	5
			0.69405	0.03806
HVLT Retention	LEDD	9	8	4
			0.05023	0.89038
HVLT Retention	sum_walking_minutes	10	5	8
				0.09037
HVLT Retention	hourly_step_count_sum	8	-0.63551	7
HVLT Retention	sleep_efficiency	1		
HVLT Retention	num_awakenings	1		
HVLT Retention	total_sleep_time_hour	1		
HVLT Retention	wake_after_sleep_onset_hour	1		
HVLT Retention	total_nrem_time_hour	1		
HVLT Retention	total_rem_time_hour	1		
HVLT Retention	total_deep_nrem_time_hour	1		
HVLT Retention	total_light_nrem_time_hour	1		
			0.63478	
HVLT Retention	hourly_mean_pulse_rate	8	8	0.09086

HVLT Retention	hourly_mean_rmssd	7	-0.29234	4	0.52463
HVLT Retention	hourly_median_rmssd	7	-0.23667	8	0.60937
HVLT Retention	hourly_rmssd_variance	5	-0.04713	1	0.94001
Symbol Digit	Semantic Fluency				
Symbol Digit	MOCA				
Symbol Digit	Benton				
Symbol Digit	Letter Number Sequencing				
Symbol Digit	HVLT Recall				
Symbol Digit	HVLT Recognition				
Symbol Digit	HVLT Retention				
Symbol Digit	Symbol Digit				
Symbol Digit	STAI trait	10	-0.6013	6	0.06594
Symbol Digit	STAI state	10	-0.41972	2	0.22722
Symbol Digit	GDS	10	-0.35847	6	0.30908
Symbol Digit	QUIP	10	-0.42983	6	0.21505
Symbol Digit	ESS	10	3	0.50168	0.24138
Symbol Digit	RBDSQ	10	9	0.90252	0.04464
Symbol Digit	Systolic BP Drop	10	-0.29809	2	0.40284
Symbol Digit	SCOPA autonome	10	-0.28895	3	0.41810
Symbol Digit	Schwab England ADL	10	6	0.71128	0.13438
Symbol Digit	UPDRS I	10	4	0.31241	0.35617
Symbol Digit	UPDRS II	10	9	0.98528	0.00672
Symbol Digit	UPDRS III OFF	8	-0.32485	5	0.43239
Symbol Digit	UPDRS III ON	10	-0.14478	4	0.68984
Symbol Digit	UPDRS IV	10	-0.17891	1	0.62092
Symbol Digit	LEDD	9	-0.07726	3	0.84339
Symbol Digit	sum_walking_minutes	10	-0.08616	3	0.81292
Symbol Digit	hourly_step_count_sum	8	4	3	0.18793
Symbol Digit	sleep_efficiency	1			0.65583
Symbol Digit	num_awakenings	1			

Symbol Digit	total_sleep_time_hour	1		
Symbol Digit	wake_after_sleep_onset_hour	1		
Symbol Digit	total_nrem_time_hour	1		
Symbol Digit	total_rem_time_hour	1		
Symbol Digit	total_deep_nrem_time_hour	1		
Symbol Digit	total_light_nrem_time_hour	1		0.59280
Symbol Digit	hourly_mean_pulse_rate	8	-0.22461	9
Symbol Digit	hourly_mean_rmssd	7	-0.40528	9
Symbol Digit	hourly_median_rmssd	7	-0.41816	9
Symbol Digit	hourly_rmssd_variance	5	0.4825	9
STAI trait	Semantic Fluency			
STAI trait	MOCA			
STAI trait	Benton			
STAI trait	Letter Number Sequencing			
STAI trait	HVLT Recall			
STAI trait	HVLT Recognition			
STAI trait	HVLT Retention			
STAI trait	Symbol Digit			
STAI trait	STAI trait		0.56492	0.07016
STAI trait	STAI state	11	3	9
STAI trait	GDS	11	0.37118	0.26105
STAI trait	QUIP	11	8	4
STAI trait	ESS	11	0.21753	
STAI trait	RBDSQ	11	4	0.52052
STAI trait	Systolic BP Drop	11	-0.14389	0.67297
STAI trait	SCOPA autonome	11	-0.16971	1
STAI trait	Schwab England ADL	11	-0.16971	0.61786
STAI trait	UPDRS I	11	-0.16971	3
STAI trait	UPDRS II	11	-0.16971	0.21035
STAI trait	UPDRS III OFF	9	0.41006	9
STAI trait	UPDRS III ON	10	0.04276	0.90064
STAI trait	UPDRS IV	10	0.04276	0.90064
STAI trait		9	7	1
STAI trait		11	-0.04037	0.90618
STAI trait		11	-0.31278	2
STAI trait		11	-0.25874	0.34901
STAI trait		11	0.20313	0.44234
STAI trait		9	8	8
STAI trait		10	-0.01455	0.60013
STAI trait		10	-0.12595	0.96817
STAI trait		10	-0.12595	4
STAI trait		10	-0.12595	0.72881
STAI trait		10	-0.12595	2

				0.38231
STAI trait	LEDD	10	-0.31066	1
				0.78118
STAI trait	sum_walking_minutes	11	-0.09498	7
			0.08519	0.82748
STAI trait	hourly_step_count_sum	9	6	7
STAI trait	sleep_efficiency	2	-1	1
STAI trait	num_awakenings	2	1	1
STAI trait	total_sleep_time_hour	2	-1	1
	wake_after_sleep_onset_hou			
STAI trait	r	2	1	1
STAI trait	total_nrem_time_hour	2	-1	1
STAI trait	total_rem_time_hour	2	-1	1
STAI trait	total_deep_nrem_time_hour	2	-1	1
STAI trait	total_light_nrem_time_hour	2	-1	1
				0.30819
STAI trait	hourly_mean_pulse_rate	9	-0.38355	6
			0.34507	0.40250
STAI trait	hourly_mean_rmssd	8	8	9
			0.29519	0.47782
STAI trait	hourly_median_rmssd	8	1	9
				0.36487
STAI trait	hourly_rmssd_variance	6	-0.45477	4
STAI state	Semantic Fluency			
STAI state	MOCA			
STAI state	Benton			
STAI state	Letter Number Sequencing			
STAI state	HVLT Recall			
STAI state	HVLT Recognition			
STAI state	HVLT Retention			
STAI state	Symbol Digit			
STAI state	STAI trait			
STAI state	STAI state			
				0.84920
STAI state	GDS	11	-0.06509	8
			0.00618	0.98559
STAI state	QUIP	11	9	2
			0.18295	0.59025
STAI state	ESS	11	8	9
			0.16648	0.62467
STAI state	RBDSQ	11	2	1
			0.30479	0.36209
STAI state	Systolic BP Drop	11	9	6
				0.35954
STAI state	SCOPA autonome	11	-0.30634	6
			0.51097	0.10820
STAI state	Schwab England ADL	11	6	9
				0.00552
STAI state	UPDRS I	11	-0.77046	2

STAI state	UPDRS II	11	-0.30872	0.35563
			0.18707	0.62982
STAI state	UPDRS III OFF	9	9	8
			0.27927	0.43454
STAI state	UPDRS III ON	10	5	5
				0.25872
STAI state	UPDRS IV	10	-0.3949	9
				0.09614
STAI state	LEDD	10	-0.5546	8
				0.76512
STAI state	sum_walking_minutes	11	-0.10212	4
			0.66907	0.04874
STAI state	hourly_step_count_sum	9	6	6
STAI state	sleep_efficiency	2	-1	1
STAI state	num_awakenings	2	1	1
STAI state	total_sleep_time_hour	2	-1	1
	wake_after_sleep_onset_hour			
STAI state	r	2	1	1
STAI state	total_nrem_time_hour	2	-1	1
STAI state	total_rem_time_hour	2	-1	1
STAI state	total_deep_nrem_time_hour	2	-1	1
STAI state	total_light_nrem_time_hour	2	-1	1
				0.37535
STAI state	hourly_mean_pulse_rate	9	-0.33688	5
			0.50102	0.20595
STAI state	hourly_mean_rmssd	8	3	4
			0.47554	0.23366
STAI state	hourly_median_rmssd	8	4	1
			0.04313	0.93534
STAI state	hourly_rmssd_variance	6	2	2
GDS	Semantic Fluency			
GDS	MOCA			
GDS	Benton			
GDS	Letter Number Sequencing			
GDS	HVLT Recall			
GDS	HVLT Recognition			
GDS	HVLT Retention			
GDS	Symbol Digit			
GDS	STAI trait			
GDS	STAI state			
GDS	GDS			
				0.05246
GDS	QUIP	11	0.59703	8
			0.39417	0.23031
GDS	ESS	11	1	2
			0.27021	0.42161
GDS	RBDSQ	11	4	7
			0.59222	0.05489
GDS	Systolic BP Drop	11	1	9

			0.31429	0.34655
GDS	SCOPA autonome	11	8	1
				0.18606
GDS	Schwab England ADL	11	-0.43067	6
			0.41070	0.20956
GDS	UPDRS I	11	7	8
			0.68583	0.01981
GDS	UPDRS II	11	6	3
				0.62818
GDS	UPDRS III OFF	9	-0.18796	3
				0.54903
GDS	UPDRS III ON	10	-0.21595	3
			0.27160	0.44779
GDS	UPDRS IV	10	1	5
			0.03922	0.91433
GDS	LEDD	10	2	3
				0.03575
GDS	sum_walking_minutes	11	-0.63514	3
				0.09653
GDS	hourly_step_count_sum	9	-0.58704	8
GDS	sleep_efficiency	2	-1	1
GDS	num_awakenings	2	1	1
GDS	total_sleep_time_hour	2	-1	1
	wake_after_sleep_onset_hour			
GDS	r	2	1	1
GDS	total_nrem_time_hour	2	-1	1
GDS	total_rem_time_hour	2	-1	1
GDS	total_deep_nrem_time_hour	2	-1	1
GDS	total_light_nrem_time_hour	2	-1	1
			0.08756	0.82275
GDS	hourly_mean_pulse_rate	9	1	7
			0.20320	0.62934
GDS	hourly_mean_rmssd	8	7	5
				0.57869
GDS	hourly_median_rmssd	8	0.23299	6
				0.25085
GDS	hourly_rmssd_variance	6	-0.55704	8
QUIP	Semantic Fluency			
QUIP	MOCA			
QUIP	Benton			
QUIP	Letter Number Sequencing			
QUIP	HVLT Recall			
QUIP	HVLT Recognition			
QUIP	HVLT Retention			
QUIP	Symbol Digit			
QUIP	STAI trait			
QUIP	STAI state			
QUIP	GDS			
QUIP	QUIP			

			0.34488	0.29894
QUIP	ESS	11	1	6
QUIP	RBDSQ	11	0.15008	0.65961
			0.12624	0.71146
QUIP	Systolic BP Drop	11	8	9
			0.00954	0.97778
QUIP	SCOPA autonome	11	1	8
QUIP	Schwab England ADL	11	-0.36635	0.26781
			0.38552	0.24161
QUIP	UPDRS I	11	5	6
			0.21891	0.51780
QUIP	UPDRS II	11	7	6
				0.63327
QUIP	UPDRS III OFF	9	-0.18523	5
				0.37797
QUIP	UPDRS III ON	10	0.31335	8
			0.04987	0.89117
QUIP	UPDRS IV	10	1	8
			0.15561	0.66772
QUIP	LEDD	10	1	4
				0.62083
QUIP	sum_walking_minutes	11	-0.1683	4
				0.20822
QUIP	hourly_step_count_sum	9	-0.4641	9
QUIP	sleep_efficiency	2	-1	1
QUIP	num_awakenings	2	1	1
QUIP	total_sleep_time_hour	2	-1	1
	wake_after_sleep_onset_hour			
QUIP	r	2	1	1
QUIP	total_nrem_time_hour	2	-1	1
QUIP	total_rem_time_hour	2	-1	1
QUIP	total_deep_nrem_time_hour	2	-1	1
QUIP	total_light_nrem_time_hour	2	-1	1
			0.30398	0.42645
QUIP	hourly_mean_pulse_rate	9	5	4
			0.67686	0.06522
QUIP	hourly_mean_rmssd	8	9	8
			0.69414	0.05612
QUIP	hourly_median_rmssd	8	1	7
				0.09009
QUIP	hourly_rmssd_variance	6	-0.74373	7
ESS	Semantic Fluency			
ESS	MOCA			
ESS	Benton			
ESS	Letter Number Sequencing			
ESS	HVLT Recall			
ESS	HVLT Recognition			
ESS	HVLT Retention			
ESS	Symbol Digit			

ESS	STAI trait			
ESS	STAI state			
ESS	GDS			
ESS	QUIP			
ESS	ESS		0.46761	0.14696
ESS	RBDSQ	11	2	7
ESS	Systolic BP Drop	11	0.20875	0.5379
				0.72932
ESS	SCOPA autonome	11	-0.11816	9
			0.37237	0.25941
ESS	Schwab England ADL	11	5	3
			0.07274	0.83168
ESS	UPDRS I	11	3	2
			0.42161	0.19651
ESS	UPDRS II	11	6	5
				0.32133
ESS	UPDRS III OFF	9	-0.37405	5
ESS	UPDRS III ON	10	-0.2644	0.46039
				0.59999
ESS	UPDRS IV	10	0.18952	7
ESS	LEDD	10	-0.02691	0.94118
				0.00873
ESS	sum_walking_minutes	11	-0.7434	8
				0.93215
ESS	hourly_step_count_sum	9	-0.03334	1
ESS	sleep_efficiency	2	-1	1
ESS	num_awakenings	2	1	1
ESS	total_sleep_time_hour	2	-1	1
	wake_after_sleep_onset_hour			
ESS	r	2	1	1
ESS	total_nrem_time_hour	2	-1	1
ESS	total_rem_time_hour	2	-1	1
ESS	total_deep_nrem_time_hour	2	-1	1
ESS	total_light_nrem_time_hour	2	-1	1
			0.20378	
ESS	hourly_mean_pulse_rate	9	6	0.59895
				0.73807
ESS	hourly_mean_rmssd	8	-0.14157	9
				0.79972
ESS	hourly_median_rmssd	8	-0.10764	3
				0.21877
ESS	hourly_rmssd_variance	6	-0.58889	5
RBDSQ	Semantic Fluency			
RBDSQ	MOCA			
RBDSQ	Benton			
RBDSQ	Letter Number Sequencing			
RBDSQ	HVLT Recall			
RBDSQ	HVLT Recognition			

RBDSQ	HVLT Retention			
RBDSQ	Symbol Digit			
RBDSQ	STAI trait			
RBDSQ	STAI state			
RBDSQ	GDS			
RBDSQ	QUIP			
RBDSQ	ESS			
RBDSQ	RBDSQ			
			0.39540	0.22872
RBDSQ	Systolic BP Drop	11	5	4
			0.27020	0.42163
RBDSQ	SCOPA autonome	11	2	8
			0.05952	0.86199
RBDSQ	Schwab England ADL	11	1	5
				0.77801
RBDSQ	UPDRS I	11	-0.09638	6
			0.34269	0.30221
RBDSQ	UPDRS II	11	7	9
				0.59565
RBDSQ	UPDRS III OFF	9	-0.20558	8
				0.26463
RBDSQ	UPDRS III ON	10	-0.39044	9
			0.34942	0.32231
RBDSQ	UPDRS IV	10	7	9
				0.56232
RBDSQ	LEDD	10	0.20897	3
				0.11569
RBDSQ	sum_walking_minutes	11	-0.5019	5
				0.81847
RBDSQ	hourly_step_count_sum	9	-0.08971	3
RBDSQ	sleep_efficiency	2	-1	1
RBDSQ	num_awakenings	2	1	1
RBDSQ	total_sleep_time_hour	2	-1	1
	wake_after_sleep_onset_hou			
RBDSQ	r	2	1	1
RBDSQ	total_nrem_time_hour	2	-1	1
RBDSQ	total_rem_time_hour	2	-1	1
RBDSQ	total_deep_nrem_time_hour	2	-1	1
RBDSQ	total_light_nrem_time_hour	2	-1	1
				0.75090
RBDSQ	hourly_mean_pulse_rate	9	-0.12385	7
				0.94421
RBDSQ	hourly_mean_rmssd	8	-0.02977	9
			0.03100	0.94190
RBDSQ	hourly_median_rmssd	8	6	1
				0.71528
RBDSQ	hourly_rmssd_variance	6	-0.19218	2
Systolic BP Drop	Semantic Fluency			
Systolic BP Drop	MOCA			

Systolic BP Drop	Benton			
Systolic BP Drop	Letter Number Sequencing			
Systolic BP Drop	HVLT Recall			
Systolic BP Drop	HVLT Recognition			
Systolic BP Drop	HVLT Retention			
Systolic BP Drop	Symbol Digit			
Systolic BP Drop	STAI trait			
Systolic BP Drop	STAI state			
Systolic BP Drop	GDS			
Systolic BP Drop	QUIP			
Systolic BP Drop	ESS			
Systolic BP Drop	RBDSQ			
Systolic BP Drop	Systolic BP Drop		0.16771	0.62206
Systolic BP Drop	SCOPA autonome	11	8	4
			0.04682	0.78939
Systolic BP Drop	Schwab England ADL	35	3	8
				0.67060
Systolic BP Drop	UPDRS I	35	-0.0745	3
			0.24628	0.15381
Systolic BP Drop	UPDRS II	35	4	2
				0.31080
Systolic BP Drop	UPDRS III OFF	10	0.35728	6
				0.47838
Systolic BP Drop	UPDRS III ON	33	-0.12783	3
				0.02767
Systolic BP Drop	UPDRS IV	34	-0.37764	1
			0.00553	0.97522
Systolic BP Drop	LEDD	34	4	2
				0.63575
Systolic BP Drop	sum_walking_minutes	35	-0.08293	3
				0.88885
Systolic BP Drop	hourly_step_count_sum	33	-0.0253	2
				0.19007
Systolic BP Drop	sleep_efficiency	11	-0.42716	3
				0.05655
Systolic BP Drop	num_awakenings	11	-0.58903	4
				0.33576
Systolic BP Drop	total_sleep_time_hour	11	-0.32102	7
Systolic BP Drop	wake_after_sleep_onset_hour	11	-0.38561	0.24151
				0.39693
Systolic BP Drop	total_nrem_time_hour	11	-0.28424	9
				0.28885
Systolic BP Drop	total_rem_time_hour	11	-0.3517	1
				0.26550
Systolic BP Drop	total_deep_nrem_time_hour	11	-0.36799	3
				0.64687
Systolic BP Drop	total_light_nrem_time_hour	11	-0.15602	6

				0.39785
Systolic BP Drop	hourly_mean_pulse_rate	33	-0.15218	2
			0.09459	0.60658
Systolic BP Drop	hourly_mean_rmssd	32	1	4
				0.64714
Systolic BP Drop	hourly_median_rmssd	32	0.08412	3
			0.19852	0.30189
Systolic BP Drop	hourly_rmssd_variance	29	4	4
SCOPA autonome	Semantic Fluency			
SCOPA autonome	MOCA			
SCOPA autonome	Benton			
SCOPA autonome	Letter Number Sequencing			
SCOPA autonome	HVLT Recall			
SCOPA autonome	HVLT Recognition			
SCOPA autonome	HVLT Retention			
SCOPA autonome	Symbol Digit			
SCOPA autonome	STAI trait			
SCOPA autonome	STAI state			
SCOPA autonome	GDS			
SCOPA autonome	QUIP			
SCOPA autonome	ESS			
SCOPA autonome	RBDSQ			
SCOPA autonome	Systolic BP Drop			
SCOPA autonome	SCOPA autonome			
SCOPA autonome	Schwab England ADL	11	-0.4893	0.12664
			0.06969	0.83864
SCOPA autonome	UPDRS I	11	8	4
			0.14588	0.66864
SCOPA autonome	UPDRS II	11	5	8
				0.57988
SCOPA autonome	UPDRS III OFF	9	0.21425	7
SCOPA autonome	UPDRS III ON	10	-0.76543	0.00987
			0.72064	
SCOPA autonome	UPDRS IV	10	8	0.01871
			0.65134	0.04133
SCOPA autonome	LEDD	10	9	3
				0.60779
SCOPA autonome	sum_walking_minutes	11	-0.17452	4
				0.06049
SCOPA autonome	hourly_step_count_sum	9	-0.64537	4
SCOPA autonome	sleep_efficiency	2	1	1
SCOPA autonome	num_awakenings	2	-1	1
SCOPA autonome	total_sleep_time_hour	2	1	1
	wake_after_sleep_onset_hour			
SCOPA autonome	r	2	-1	1
SCOPA autonome	total_nrem_time_hour	2	1	1
SCOPA autonome	total_rem_time_hour	2	1	1
SCOPA autonome	total_deep_nrem_time_hour	2	1	1
SCOPA autonome	total_light_nrem_time_hour	2	1	1

SCOPA autonome	hourly_mean_pulse_rate	9	0.31767	0.40481
		9		5
SCOPA autonome	hourly_mean_rmssd	8	-0.26399	0.52752
				7
SCOPA autonome	hourly_median_rmssd	8	-0.18314	0.66421
				2
SCOPA autonome	hourly_rmssd_variance	6	-0.22403	0.66957
				4
Schwab England ADL	Semantic Fluency			
Schwab England ADL	MOCA			
Schwab England ADL	Benton			
Schwab England ADL	Letter Number Sequencing			
Schwab England ADL	HVLT Recall			
Schwab England ADL	HVLT Recognition			
Schwab England ADL	HVLT Retention			
Schwab England ADL	Symbol Digit			
Schwab England ADL	STAI trait			
Schwab England ADL	STAI state			
Schwab England ADL	GDS			
Schwab England ADL	QUIP			
Schwab England ADL	ESS			
Schwab England ADL	RBDSQ			
Schwab England ADL	Systolic BP Drop			
Schwab England ADL	SCOPA autonome			
Schwab England ADL	Schwab England ADL			
				0.29941
Schwab England ADL	UPDRS I	35	-0.18051	4
				0.22955
Schwab England ADL	UPDRS II	35	-0.20842	8
				0.96817
Schwab England ADL	UPDRS III OFF	10	-0.01455	8
				0.07661
Schwab England ADL	UPDRS III ON	33	-0.31251	4
				0.16370
Schwab England ADL	UPDRS IV	34	-0.24435	9
				0.00713
Schwab England ADL	LEDD	34	-0.453	8
			0.08826	0.61413
Schwab England ADL	sum_walking_minutes	35	1	2
			0.19838	
Schwab England ADL	hourly_step_count_sum	33	4	0.26841
				0.80558
Schwab England ADL	sleep_efficiency	11	-0.0842	7
			0.28798	0.39047
Schwab England ADL	num_awakenings	11	1	6
			0.26067	0.43881
Schwab England ADL	total_sleep_time_hour	11	3	8
	wake_after_sleep_onset_hou		0.21465	0.52619
Schwab England ADL	r	11	3	5

Schwab England ADL	total_nrem_time_hour	11	0.22933	3	0.49756
			0.28866	3	0.38929
Schwab England ADL	total_rem_time_hour	11	6	9	0.40244
Schwab England ADL	total_deep_nrem_time_hour	11	-0.28107	4	0.27560
Schwab England ADL	total_light_nrem_time_hour	11	0.36085	2	0.11037
Schwab England ADL	hourly_mean_pulse_rate	33	-0.28311	4	0.07142
Schwab England ADL	hourly_mean_rmssd	32	-0.32294	2	0.06629
Schwab England ADL	hourly_median_rmssd	32	-0.32863	1	0.39388
Schwab England ADL	hourly_rmssd_variance	29	-0.16448	3	
UPDRS I	Semantic Fluency				
UPDRS I	MOCA				
UPDRS I	Benton				
UPDRS I	Letter Number Sequencing				
UPDRS I	HVLT Recall				
UPDRS I	HVLT Recognition				
UPDRS I	HVLT Retention				
UPDRS I	Symbol Digit				
UPDRS I	STAI trait				
UPDRS I	STAI state				
UPDRS I	GDS				
UPDRS I	QUIP				
UPDRS I	ESS				
UPDRS I	RBDSQ				
UPDRS I	Systolic BP Drop				
UPDRS I	SCOPA autonome				
UPDRS I	Schwab England ADL				
UPDRS I	UPDRS I				
			0.46210	3	0.00519
UPDRS I	UPDRS II	35	3	5	
UPDRS I	UPDRS III OFF	10	-0.29464		0.40857
UPDRS I	UPDRS III ON	33	-0.2095		0.24195
			0.32632		0.05962
UPDRS I	UPDRS IV	34	4	8	
					0.99130
UPDRS I	LEDD	34	-0.00194	7	
					0.57947
UPDRS I	sum_walking_minutes	35	-0.09697	4	
UPDRS I	hourly_step_count_sum	33	-0.28214		0.11166
			0.56673		0.06907
UPDRS I	sleep_efficiency	11	1	8	
					0.91749
UPDRS I	num_awakenings	11	-0.03549	9	

			0.43361	0.18273
UPDRS I	total_sleep_time_hour	11	3	8
UPDRS I	wake_after_sleep_onset_hour	11	-0.1159	6
			0.37664	0.25355
UPDRS I	total_nrem_time_hour	11	3	7
			0.49026	0.12577
UPDRS I	total_rem_time_hour	11	9	3
			0.83271	0.00146
UPDRS I	total_deep_nrem_time_hour	11	8	4
			0.06645	0.84607
UPDRS I	total_light_nrem_time_hour	11	5	3
				0.24624
UPDRS I	hourly_mean_pulse_rate	33	-0.20764	7
				0.67192
UPDRS I	hourly_mean_rmssd	32	0.07785	6
			0.12340	0.50101
UPDRS I	hourly_median_rmssd	32	7	2
			0.08632	0.65612
UPDRS I	hourly_rmssd_variance	29	7	4
UPDRS II	Semantic Fluency			
UPDRS II	MOCA			
UPDRS II	Benton			
UPDRS II	Letter Number Sequencing			
UPDRS II	HVLT Recall			
UPDRS II	HVLT Recognition			
UPDRS II	HVLT Retention			
UPDRS II	Symbol Digit			
UPDRS II	STAI trait			
UPDRS II	STAI state			
UPDRS II	GDS			
UPDRS II	QUIP			
UPDRS II	ESS			
UPDRS II	RBDSQ			
UPDRS II	Systolic BP Drop			
UPDRS II	SCOPA autonome			
UPDRS II	Schwab England ADL			
UPDRS II	UPDRS I			
UPDRS II	UPDRS II			
				0.26103
UPDRS II	UPDRS III OFF	10	-0.39315	5
UPDRS II	UPDRS III ON	33	-0.20743	0.24673
				0.47897
UPDRS II	UPDRS IV	34	0.12563	5
				0.56507
UPDRS II	LEDD	34	-0.10223	6
				0.62267
UPDRS II	sum_walking_minutes	35	-0.08615	2

				0.76655
UPDRS II	hourly_step_count_sum	33	-0.05371	7
			0.15563	
UPDRS II	sleep_efficiency	11	7	0.6477
				0.50233
UPDRS II	num_awakenings	11	-0.22686	4
			0.02907	0.93237
UPDRS II	total_sleep_time_hour	11	5	3
	wake_after_sleep_onset_hour			0.83310
UPDRS II	r	11	-0.07212	2
			0.10732	0.75346
UPDRS II	total_nrem_time_hour	11	1	2
				0.68479
UPDRS II	total_rem_time_hour	11	-0.13844	3
				0.82531
UPDRS II	total_deep_nrem_time_hour	11	-0.07553	3
			0.14610	
UPDRS II	total_light_nrem_time_hour	11	2	0.66818
				0.73643
UPDRS II	hourly_mean_pulse_rate	33	-0.06088	8
			0.06645	0.71783
UPDRS II	hourly_mean_rmssd	32	2	5
			0.12734	0.48732
UPDRS II	hourly_median_rmssd	32	8	8
			0.33637	0.07439
UPDRS II	hourly_rmssd_variance	29	8	6
UPDRS III OFF	Semantic Fluency			
UPDRS III OFF	MOCA			
UPDRS III OFF	Benton			
UPDRS III OFF	Letter Number Sequencing			
UPDRS III OFF	HVLT Recall			
UPDRS III OFF	HVLT Recognition			
UPDRS III OFF	HVLT Retention			
UPDRS III OFF	Symbol Digit			
UPDRS III OFF	STAI trait			
UPDRS III OFF	STAI state			
UPDRS III OFF	GDS			
UPDRS III OFF	QUIP			
UPDRS III OFF	ESS			
UPDRS III OFF	RBDSQ			
UPDRS III OFF	Systolic BP Drop			
UPDRS III OFF	SCOPA autonome			
UPDRS III OFF	Schwab England ADL			
UPDRS III OFF	UPDRS I			
UPDRS III OFF	UPDRS II			
UPDRS III OFF	UPDRS III OFF			
			0.32518	0.43189
UPDRS III OFF	UPDRS III ON	8	9	2

UPDRS III OFF	UPDRS IV	9	0.14062	0.71820
			5	1
			0.30066	0.43177
UPDRS III OFF	LEDD	9	4	7
			0.40194	0.24956
UPDRS III OFF	sum_walking_minutes	10	1	3
				0.61079
UPDRS III OFF	hourly_step_count_sum	8	-0.21402	1
UPDRS III OFF	sleep_efficiency	1		
UPDRS III OFF	num_awakenings	1		
UPDRS III OFF	total_sleep_time_hour	1		
	wake_after_sleep_onset_hou			
UPDRS III OFF	r	1		
UPDRS III OFF	total_nrem_time_hour	1		
UPDRS III OFF	total_rem_time_hour	1		
UPDRS III OFF	total_deep_nrem_time_hour	1		
UPDRS III OFF	total_light_nrem_time_hour	1		
			0.58015	
UPDRS III OFF	hourly_mean_pulse_rate	8	3	0.13165
				0.72958
UPDRS III OFF	hourly_mean_rmssd	7	0.16138	6
			0.20585	0.65788
UPDRS III OFF	hourly_median_rmssd	7	6	6
			0.47500	0.34108
UPDRS III OFF	hourly_rmssd_variance	6	3	2
UPDRS III ON	Semantic Fluency			
UPDRS III ON	MOCA			
UPDRS III ON	Benton			
UPDRS III ON	Letter Number Sequencing			
UPDRS III ON	HVLT Recall			
UPDRS III ON	HVLT Recognition			
UPDRS III ON	HVLT Retention			
UPDRS III ON	Symbol Digit			
UPDRS III ON	STAI trait			
UPDRS III ON	STAI state			
UPDRS III ON	GDS			
UPDRS III ON	QUIP			
UPDRS III ON	ESS			
UPDRS III ON	RBDSQ			
UPDRS III ON	Systolic BP Drop			
UPDRS III ON	SCOPA autonome			
UPDRS III ON	Schwab England ADL			
UPDRS III ON	UPDRS I			
UPDRS III ON	UPDRS II			
UPDRS III ON	UPDRS III OFF			
UPDRS III ON	UPDRS III ON			
				0.60581
UPDRS III ON	UPDRS IV	33	-0.09323	3

UPDRS III ON	LEDD	32	0.51096	0.00280
			2	4
				0.91626
UPDRS III ON	sum_walking_minutes	33	-0.01903	8
				0.39982
UPDRS III ON	hourly_step_count_sum	31	-0.15672	5
			0.34854	0.32362
UPDRS III ON	sleep_efficiency	10	7	2
			0.21275	0.55509
UPDRS III ON	num_awakenings	10	9	1
			0.54921	0.10010
UPDRS III ON	total_sleep_time_hour	10	7	4
	wake_after_sleep_onset_hour		0.06881	0.85018
UPDRS III ON	r	10	3	2
			0.39858	0.25391
UPDRS III ON	total_nrem_time_hour	10	1	5
			0.78341	0.00734
UPDRS III ON	total_rem_time_hour	10	8	3
			0.28160	0.43055
UPDRS III ON	total_deep_nrem_time_hour	10	7	6
			0.31355	0.37765
UPDRS III ON	total_light_nrem_time_hour	10	3	3
			0.36697	0.04228
UPDRS III ON	hourly_mean_pulse_rate	31	4	2
			0.19331	
UPDRS III ON	hourly_mean_rmssd	30	3	0.30606
			0.19364	0.30520
UPDRS III ON	hourly_median_rmssd	30	7	9
				0.14257
UPDRS III ON	hourly_rmssd_variance	27	-0.2898	4
UPDRS IV	Semantic Fluency			
UPDRS IV	MOCA			
UPDRS IV	Benton			
UPDRS IV	Letter Number Sequencing			
UPDRS IV	HVLT Recall			
UPDRS IV	HVLT Recognition			
UPDRS IV	HVLT Retention			
UPDRS IV	Symbol Digit			
UPDRS IV	STAI trait			
UPDRS IV	STAI state			
UPDRS IV	GDS			
UPDRS IV	QUIP			
UPDRS IV	ESS			
UPDRS IV	RBDSQ			
UPDRS IV	Systolic BP Drop			
UPDRS IV	SCOPA autonome			
UPDRS IV	Schwab England ADL			
UPDRS IV	UPDRS I			
UPDRS IV	UPDRS II			

UPDRS IV	UPDRS III OFF			
UPDRS IV	UPDRS III ON			
UPDRS IV	UPDRS IV			
			0.16825	0.34928
UPDRS IV	LEDD	33	4	6
			0.06276	0.72437
UPDRS IV	sum_walking_minutes	34	1	6
				0.58925
UPDRS IV	hourly_step_count_sum	32	-0.09915	8
				0.36736
UPDRS IV	sleep_efficiency	10	0.32001	8
			0.43617	0.20760
UPDRS IV	num_awakenings	10	4	8
			0.01298	0.97159
UPDRS IV	total_sleep_time_hour	10	9	2
	wake_after_sleep_onset_hour		0.31930	
UPDRS IV	r	10	7	0.36848
			0.03597	0.92140
UPDRS IV	total_nrem_time_hour	10	4	9
				0.91556
UPDRS IV	total_rem_time_hour	10	-0.03866	6
				0.22237
UPDRS IV	total_deep_nrem_time_hour	10	0.42371	7
				0.76950
UPDRS IV	total_light_nrem_time_hour	10	-0.10657	4
			0.21970	0.22696
UPDRS IV	hourly_mean_pulse_rate	32	4	4
				0.74740
UPDRS IV	hourly_mean_rmssd	31	-0.06027	7
			0.01336	0.94313
UPDRS IV	hourly_median_rmssd	31	1	1
				0.26957
UPDRS IV	hourly_rmssd_variance	28	-0.21602	6
LEDD	Semantic Fluency			
LEDD	MOCA			
LEDD	Benton			
LEDD	Letter Number Sequencing			
LEDD	HVLT Recall			
LEDD	HVLT Recognition			
LEDD	HVLT Retention			
LEDD	Symbol Digit			
LEDD	STAI trait			
LEDD	STAI state			
LEDD	GDS			
LEDD	QUIP			
LEDD	ESS			
LEDD	RBDSQ			
LEDD	Systolic BP Drop			
LEDD	SCOPA autonome			

LEDD	Schwab England ADL			
LEDD	UPDRS I			
LEDD	UPDRS II			
LEDD	UPDRS III OFF			
LEDD	UPDRS III ON			
LEDD	UPDRS IV			
LEDD	LEDD			
			0.07969	0.65413
LEDD	sum_walking_minutes	34	4	7
				0.53865
LEDD	hourly_step_count_sum	32	-0.11283	4
			0.45092	0.16392
LEDD	sleep_efficiency	11	5	2
				0.08634
LEDD	num_awakenings	11	-0.54007	5
			0.13942	0.68264
LEDD	total_sleep_time_hour	11	7	1
	wake_after_sleep_onset_hour			
LEDD	r	11	-0.49912	0.11806
				0.64596
LEDD	total_nrem_time_hour	11	0.15645	3
			0.08386	0.80633
LEDD	total_rem_time_hour	11	8	1
				0.02150
LEDD	total_deep_nrem_time_hour	11	0.67931	5
				0.75208
LEDD	total_light_nrem_time_hour	11	-0.10794	1
			0.23898	0.18773
LEDD	hourly_mean_pulse_rate	32	8	3
			0.11764	0.52850
LEDD	hourly_mean_rmssd	31	3	6
			0.14119	0.44867
LEDD	hourly_median_rmssd	31	2	4
				0.21976
LEDD	hourly_rmssd_variance	29	-0.23501	1
sum_walking_minutes	Semantic Fluency			
sum_walking_minutes	MOCA			
sum_walking_minutes	Benton			
sum_walking_minutes	Letter Number Sequencing			
sum_walking_minutes	HVLT Recall			
sum_walking_minutes	HVLT Recognition			
sum_walking_minutes	HVLT Retention			
sum_walking_minutes	Symbol Digit			
sum_walking_minutes	STAI trait			
sum_walking_minutes	STAI state			
sum_walking_minutes	GDS			
sum_walking_minutes	QUIP			
sum_walking_minutes	ESS			
sum_walking_minutes	RBDSQ			

sum_walking_minutes	Systolic BP Drop			
sum_walking_minutes	SCOPA autonome			
sum_walking_minutes	Schwab England ADL			
sum_walking_minutes	UPDRS I			
sum_walking_minutes	UPDRS II			
sum_walking_minutes	UPDRS III OFF			
sum_walking_minutes	UPDRS III ON			
sum_walking_minutes	UPDRS IV			
sum_walking_minutes	LEDD			
sum_walking_minutes	sum_walking_minutes		0.84292	
sum_walking_minutes	hourly_step_count_sum	33	9	7.53E-10
			0.15741	0.64389
sum_walking_minutes	sleep_efficiency	11	9	7
sum_walking_minutes	num_awakenings	11	-0.61583	0.04367
				0.75863
sum_walking_minutes	total_sleep_time_hour	11	-0.10501	7
sum_walking_minutes	wake_after_sleep_onset_hour	11	-0.65963	0.02722
				6
				0.73883
sum_walking_minutes	total_nrem_time_hour	11	-0.11388	9
				0.83472
sum_walking_minutes	total_rem_time_hour	11	-0.07141	1
			0.48914	0.12677
sum_walking_minutes	total_deep_nrem_time_hour	11	3	7
				0.33532
sum_walking_minutes	total_light_nrem_time_hour	11	-0.3213	2
			0.40490	0.01941
sum_walking_minutes	hourly_mean_pulse_rate	33	6	7
sum_walking_minutes	hourly_mean_rmssd	32	-0.26671	0.14005
				0.15685
sum_walking_minutes	hourly_median_rmssd	32	-0.25626	9
				0.60593
sum_walking_minutes	hourly_rmssd_variance	29	-0.09995	9
hourly_step_count_sum	Semantic Fluency			
hourly_step_count_sum	MOCA			
hourly_step_count_sum	Benton			
hourly_step_count_sum	Letter Number Sequencing			
hourly_step_count_sum	HVLT Recall			
hourly_step_count_sum	HVLT Recognition			
hourly_step_count_sum	HVLT Retention			
hourly_step_count_sum	Symbol Digit			
hourly_step_count_sum	STAI trait			
hourly_step_count_sum	STAI state			
hourly_step_count_sum	GDS			
hourly_step_count_sum	QUIP			
hourly_step_count_sum	ESS			
hourly_step_count_sum	RBDSQ			

hourly_step_count_sum	Systolic BP Drop				
hourly_step_count_sum	SCOPA autonome				
hourly_step_count_sum	Schwab England ADL				
hourly_step_count_sum	UPDRS I				
hourly_step_count_sum	UPDRS II				
hourly_step_count_sum	UPDRS III OFF				
hourly_step_count_sum	UPDRS III ON				
hourly_step_count_sum	UPDRS IV				
hourly_step_count_sum	LEDD				
hourly_step_count_sum	sum_walking_minutes				
hourly_step_count_sum	hourly_step_count_sum				0.47440
hourly_step_count_sum	sleep_efficiency	11	-0.24147	5	0.01814
hourly_step_count_sum	num_awakenings	11	-0.69269	1	0.22444
hourly_step_count_sum	total_sleep_time_hour	11	-0.39876	4	0.04011
hourly_step_count_sum	wake_after_sleep_onset_hour	11	-0.62416	7	0.26694
hourly_step_count_sum	total_nrem_time_hour	11	-0.36696	6	0.21305
hourly_step_count_sum	total_rem_time_hour	11	-0.40786	5	0.95174
hourly_step_count_sum	total_deep_nrem_time_hour	11	7	3	0.21908
hourly_step_count_sum	total_light_nrem_time_hour	11	-0.403	9	0.18269
hourly_step_count_sum	hourly_mean_pulse_rate	33	2	9	0.13623
hourly_step_count_sum	hourly_mean_rmssd	32	-0.26921	6	0.13798
hourly_step_count_sum	hourly_median_rmssd	32	-0.26806	7	0.75087
hourly_step_count_sum	hourly_rmssd_variance	29	1	1	
sleep_efficiency	Semantic Fluency				
sleep_efficiency	MOCA				
sleep_efficiency	Benton				
sleep_efficiency	Letter Number Sequencing				
sleep_efficiency	HVLT Recall				
sleep_efficiency	HVLT Recognition				
sleep_efficiency	HVLT Retention				
sleep_efficiency	Symbol Digit				
sleep_efficiency	STAI trait				
sleep_efficiency	STAI state				
sleep_efficiency	GDS				
sleep_efficiency	QUIP				
sleep_efficiency	ESS				
sleep_efficiency	RBDSQ				

sleep_efficiency	Systolic BP Drop			
sleep_efficiency	SCOPA autonome			
sleep_efficiency	Schwab England ADL			
sleep_efficiency	UPDRS I			
sleep_efficiency	UPDRS II			
sleep_efficiency	UPDRS III OFF			
sleep_efficiency	UPDRS III ON			
sleep_efficiency	UPDRS IV			
sleep_efficiency	LEDD			
sleep_efficiency	sum_walking_minutes			
sleep_efficiency	hourly_step_count_sum			
sleep_efficiency	sleep_efficiency		0.01395	0.96751
sleep_efficiency	num_awakenings	11	7	3
			0.79218	0.00365
sleep_efficiency	total_sleep_time_hour	11	6	1
	wake_after_sleep_onset_hour			0.69375
sleep_efficiency	r	11	-0.13432	9
			0.81218	0.00238
sleep_efficiency	total_nrem_time_hour	11	5	9
			0.63667	0.03516
sleep_efficiency	total_rem_time_hour	11	6	9
			0.49398	0.12249
sleep_efficiency	total_deep_nrem_time_hour	11	9	2
			0.67247	0.02338
sleep_efficiency	total_light_nrem_time_hour	11	1	5
				0.39391
sleep_efficiency	hourly_mean_pulse_rate	11	-0.28599	1
			0.20410	0.54718
sleep_efficiency	hourly_mean_rmssd	11	6	4
			0.21640	0.52273
sleep_efficiency	hourly_median_rmssd	11	8	5
			0.02465	0.94262
sleep_efficiency	hourly_rmssd_variance	11	9	9
num_awakenings	Semantic Fluency			
num_awakenings	MOCA			
num_awakenings	Benton			
num_awakenings	Letter Number Sequencing			
num_awakenings	HVLT Recall			
num_awakenings	HVLT Recognition			
num_awakenings	HVLT Retention			
num_awakenings	Symbol Digit			
num_awakenings	STAI trait			
num_awakenings	STAI state			
num_awakenings	GDS			
num_awakenings	QUIP			
num_awakenings	ESS			
num_awakenings	RBDSQ			

num awakenings	Systolic BP Drop			
num awakenings	SCOPA autonome			
num awakenings	Schwab England ADL			
num awakenings	UPDRS I			
num awakenings	UPDRS II			
num awakenings	UPDRS III OFF			
num awakenings	UPDRS III ON			
num awakenings	UPDRS IV			
num awakenings	LEDD			
num awakenings	sum_walking_minutes			
num awakenings	hourly_step_count_sum			
num awakenings	sleep_efficiency			
num awakenings	num awakenings		0.23031	0.49567
num awakenings	total_sleep_time_hour	11	1	5
num awakenings	wake_after_sleep_onset_hour	11	0.94792	
num awakenings		11	6	9.11E-06
num awakenings	total_nrem_time_hour	11	0.25406	0.45091
num awakenings		11	6	9
num awakenings	total_rem_time_hour	11	0.14764	0.66484
num awakenings		11	9	3
num awakenings	total_deep_nrem_time_hour	11	-0.02574	0.94011
num awakenings		11	0.28364	6
num awakenings	total_light_nrem_time_hour	11	6	0.39796
num awakenings		11	6	5
num awakenings	hourly_mean_pulse_rate	11	-0.44399	0.17131
num awakenings		11	0.16864	1
num awakenings	hourly_mean_rmssd	11	7	0.62010
num awakenings		11	0.20672	9
num awakenings	hourly_median_rmssd	11	9	0.54193
num awakenings		11		3
num awakenings	hourly_rmssd_variance	11	-0.46617	0.14838
total_sleep_time_hour	Semantic Fluency			6
total_sleep_time_hour	MOCA			
total_sleep_time_hour	Benton			
total_sleep_time_hour	Letter Number Sequencing			
total_sleep_time_hour	HVLT Recall			
total_sleep_time_hour	HVLT Recognition			
total_sleep_time_hour	HVLT Retention			
total_sleep_time_hour	Symbol Digit			
total_sleep_time_hour	STAI trait			
total_sleep_time_hour	STAI state			
total_sleep_time_hour	GDS			
total_sleep_time_hour	QUIP			
total_sleep_time_hour	ESS			
total_sleep_time_hour	RBDSQ			
total_sleep_time_hour	Systolic BP Drop			

total_sleep_time_hour	SCOPA autonome			
total_sleep_time_hour	Schwab England ADL			
total_sleep_time_hour	UPDRS I			
total_sleep_time_hour	UPDRS II			
total_sleep_time_hour	UPDRS III OFF			
total_sleep_time_hour	UPDRS III ON			
total_sleep_time_hour	UPDRS IV			
total_sleep_time_hour	LEDD			
total_sleep_time_hour	sum_walking_minutes			
total_sleep_time_hour	hourly_step_count_sum			
total_sleep_time_hour	sleep_efficiency			
total_sleep_time_hour	num_awakenings			
total_sleep_time_hour	total_sleep_time_hour			
total_sleep_time_hour	wake_after_sleep_onset_hour	11	0.11222	0.74251
total_sleep_time_hour	total_nrem_time_hour	11	0.97831	1.85E-07
total_sleep_time_hour	total_rem_time_hour	11	0.90167	0.00014
total_sleep_time_hour	total_deep_nrem_time_hour	11	0.41934	0.19919
total_sleep_time_hour	total_light_nrem_time_hour	11	0.88144	0.00033
total_sleep_time_hour	hourly_mean_pulse_rate	11	-0.47231	0.14240
total_sleep_time_hour	hourly_mean_rmssd	11	0.18247	0.59124
total_sleep_time_hour	hourly_median_rmssd	11	0.19575	0.8
total_sleep_time_hour	hourly_rmssd_variance	11	0.56404	0.21580
wake_after_sleep_onset_hour	hourly_rmssd_variance	11	-0.40564	5
wake_after_sleep_onset_hour	Semantic Fluency			
wake_after_sleep_onset_hour	MOCA			
wake_after_sleep_onset_hour	Benton			
wake_after_sleep_onset_hour	Letter Number Sequencing			
wake_after_sleep_onset_hour	HVLT Recall			
wake_after_sleep_onset_hour	HVLT Recognition			
wake_after_sleep_onset_hour	HVLT Retention			
wake_after_sleep_onset_hour	Symbol Digit			
wake_after_sleep_onset_hour	STAI trait			
wake_after_sleep_onset_hour	STAI state			

wake_after_sleep_onset_hour	GDS			
wake_after_sleep_onset_hour	QUIP			
wake_after_sleep_onset_hour	ESS			
wake_after_sleep_onset_hour	RBDSQ			
wake_after_sleep_onset_hour	Systolic BP Drop			
wake_after_sleep_onset_hour	SCOPA autonome			
wake_after_sleep_onset_hour	Schwab England ADL			
wake_after_sleep_onset_hour	UPDRS I			
wake_after_sleep_onset_hour	UPDRS II			
wake_after_sleep_onset_hour	UPDRS III OFF			
wake_after_sleep_onset_hour	UPDRS III ON			
wake_after_sleep_onset_hour	UPDRS IV			
wake_after_sleep_onset_hour	LEDD			
wake_after_sleep_onset_hour	sum_walking_minutes			
wake_after_sleep_onset_hour	hourly_step_count_sum			
wake_after_sleep_onset_hour	sleep_efficiency			
wake_after_sleep_onset_hour	num_awakenings			
wake_after_sleep_onset_hour	total_sleep_time_hour			
wake_after_sleep_onset_hour	wake_after_sleep_onset_hour			
wake_after_sleep_onset_hour	total_nrem_time_hour	11	0.17544	1 0.60587
wake_after_sleep_onset_hour	total_rem_time_hour	11	-0.03584	0.91667 3
wake_after_sleep_onset_hour	total_deep_nrem_time_hour	11	-0.107	0.75418 5
wake_after_sleep_onset_hour	total_light_nrem_time_hour	11	0.23213	0.49216 4
wake_after_sleep_onset_hour	hourly_mean_pulse_rate	11	-0.43541	0.18072 9
wake_after_sleep_onset_hour	hourly_mean_rmssd	11	0.22731	0.50145 7

wake_after_sleep_onset_hour			0.26677	0.42777
r	hourly_median_rmssd	11	5	9
wake_after_sleep_onset_hour				0.21554
r	hourly_rmssd_variance	11	-0.40585	4
total_nrem_time_hour	Semantic Fluency			
total_nrem_time_hour	MOCA			
total_nrem_time_hour	Benton			
total_nrem_time_hour	Letter Number Sequencing			
total_nrem_time_hour	HVLT Recall			
total_nrem_time_hour	HVLT Recognition			
total_nrem_time_hour	HVLT Retention			
total_nrem_time_hour	Symbol Digit			
total_nrem_time_hour	STAI trait			
total_nrem_time_hour	STAI state			
total_nrem_time_hour	GDS			
total_nrem_time_hour	QUIP			
total_nrem_time_hour	ESS			
total_nrem_time_hour	RBDSQ			
total_nrem_time_hour	Systolic BP Drop			
total_nrem_time_hour	SCOPA autonome			
total_nrem_time_hour	Schwab England ADL			
total_nrem_time_hour	UPDRS I			
total_nrem_time_hour	UPDRS II			
total_nrem_time_hour	UPDRS III OFF			
total_nrem_time_hour	UPDRS III ON			
total_nrem_time_hour	UPDRS IV			
total_nrem_time_hour	LEDD			
total_nrem_time_hour	sum_walking_minutes			
total_nrem_time_hour	hourly_step_count_sum			
total_nrem_time_hour	sleep_efficiency			
total_nrem_time_hour	num_awakenings			
total_nrem_time_hour	total_sleep_time_hour			
total_nrem_time_hour	wake_after_sleep_onset_hour			
total_nrem_time_hour	total_nrem_time_hour			
			0.79254	0.00362
total_nrem_time_hour	total_rem_time_hour	11	3	5
			0.36764	0.26599
total_nrem_time_hour	total_deep_nrem_time_hour	11	3	3
			0.92578	
total_nrem_time_hour	total_light_nrem_time_hour	11	1	4.34E-05
				0.17448
total_nrem_time_hour	hourly_mean_pulse_rate	11	-0.44106	8
			0.22130	0.51313
total_nrem_time_hour	hourly_mean_rmssd	11	3	7
			0.23927	0.47856
total_nrem_time_hour	hourly_median_rmssd	11	2	9
				0.31343
total_nrem_time_hour	hourly_rmssd_variance	11	-0.33531	6

total_rem_time_hour	Semantic Fluency			
total_rem_time_hour	MOCA			
total_rem_time_hour	Benton			
total_rem_time_hour	Letter Number Sequencing			
total_rem_time_hour	HVLT Recall			
total_rem_time_hour	HVLT Recognition			
total_rem_time_hour	HVLT Retention			
total_rem_time_hour	Symbol Digit			
total_rem_time_hour	STAI trait			
total_rem_time_hour	STAI state			
total_rem_time_hour	GDS			
total_rem_time_hour	QUIP			
total_rem_time_hour	ESS			
total_rem_time_hour	RBDSQ			
total_rem_time_hour	Systolic BP Drop			
total_rem_time_hour	SCOPA autonome			
total_rem_time_hour	Schwab England ADL			
total_rem_time_hour	UPDRS I			
total_rem_time_hour	UPDRS II			
total_rem_time_hour	UPDRS III OFF			
total_rem_time_hour	UPDRS III ON			
total_rem_time_hour	UPDRS IV			
total_rem_time_hour	LEDD			
total_rem_time_hour	sum_walking_minutes			
total_rem_time_hour	hourly_step_count_sum			
total_rem_time_hour	sleep_efficiency			
total_rem_time_hour	num_awakenings			
total_rem_time_hour	total_sleep_time_hour			
total_rem_time_hour	wake_after_sleep_onset_hour			
total_rem_time_hour	total_nrem_time_hour			
total_rem_time_hour	total_rem_time_hour		0.46705	0.14751
total_rem_time_hour	total_deep_nrem_time_hour	11	1	8
total_rem_time_hour	total_light_nrem_time_hour	11	2	4
total_rem_time_hour	hourly_mean_pulse_rate	11	-0.4697	5
total_rem_time_hour	hourly_mean_rmssd	11	0.07523	1
total_rem_time_hour	hourly_median_rmssd	11	0.07680	0.82241
total_rem_time_hour	hourly_rmssd_variance	11	-0.49419	4
total_deep_nrem_time_hour	Semantic Fluency			
total_deep_nrem_time_hour	MOCA			
total_deep_nrem_time_hour	Benton			
total_deep_nrem_time_hour	Letter Number Sequencing			

total_deep_nrem_time_hour	HVLT Recall			
total_deep_nrem_time_hour	HVLT Recognition			
total_deep_nrem_time_hour	HVLT Retention			
total_deep_nrem_time_hour	Symbol Digit			
total_deep_nrem_time_hour	STAI trait			
total_deep_nrem_time_hour	STAI state			
total_deep_nrem_time_hour	GDS			
total_deep_nrem_time_hour	QUIP			
total_deep_nrem_time_hour	ESS			
total_deep_nrem_time_hour	RBDSQ			
total_deep_nrem_time_hour	Systolic BP Drop			
total_deep_nrem_time_hour	SCOPA autonome			
total_deep_nrem_time_hour	Schwab England ADL			
total_deep_nrem_time_hour	UPDRS I			
total_deep_nrem_time_hour	UPDRS II			
total_deep_nrem_time_hour	UPDRS III OFF			
total_deep_nrem_time_hour	UPDRS III ON			
total_deep_nrem_time_hour	UPDRS IV			
total_deep_nrem_time_hour	LEDD			
total_deep_nrem_time_hour	sum_walking_minutes			
total_deep_nrem_time_hour	hourly_step_count_sum			
total_deep_nrem_time_hour	sleep_efficiency			
total_deep_nrem_time_hour	num_awakenings			
total_deep_nrem_time_hour	total_sleep_time_hour			
total_deep_nrem_time_hour	wake_after_sleep_onset_hour			
total_deep_nrem_time_hour	total_nrem_time_hour			
total_deep_nrem_time_hour	total_rem_time_hour			
total_deep_nrem_time_hour	total_deep_nrem_time_hour			0.97386
total_deep_nrem_time_hour	total_light_nrem_time_hour	11	-0.01123	4
				0.38293
total_deep_nrem_time_hour	hourly_mean_pulse_rate	11	-0.29239	2
			0.26346	0.43375
total_deep_nrem_time_hour	hourly_mean_rmssd	11	4	2
			0.26945	0.42296
total_deep_nrem_time_hour	hourly_median_rmssd	11	9	6
			0.04925	0.88565
total_deep_nrem_time_hour	hourly_rmssd_variance	11	2	5
total_light_nrem_time_hour	Semantic Fluency			
total_light_nrem_time_hour	MOCA			
total_light_nrem_time_hour	Benton			
total_light_nrem_time_hour	Letter Number Sequencing			
total_light_nrem_time_hour	HVLT Recall			
total_light_nrem_time_hour	HVLT Recognition			
total_light_nrem_time_hour	HVLT Retention			
total_light_nrem_time_hour	Symbol Digit			
total_light_nrem_time_hour	STAI trait			

total_light_nrem_time_hour	STAI state				
total_light_nrem_time_hour	GDS				
total_light_nrem_time_hour	QUIP				
total_light_nrem_time_hour	ESS				
total_light_nrem_time_hour	RBDSQ				
total_light_nrem_time_hour	Systolic BP Drop				
total_light_nrem_time_hour	SCOPA autonome				
total_light_nrem_time_hour	Schwab England ADL				
total_light_nrem_time_hour	UPDRS I				
total_light_nrem_time_hour	UPDRS II				
total_light_nrem_time_hour	UPDRS III OFF				
total_light_nrem_time_hour	UPDRS III ON				
total_light_nrem_time_hour	UPDRS IV				
total_light_nrem_time_hour	LEDD				
total_light_nrem_time_hour	sum_walking_minutes				
total_light_nrem_time_hour	hourly_step_count_sum				
total_light_nrem_time_hour	sleep_efficiency				
total_light_nrem_time_hour	num_awakenings				
total_light_nrem_time_hour	total_sleep_time_hour				
total_light_nrem_time_hour	wake_after_sleep_onset_hour				
total_light_nrem_time_hour	total_nrem_time_hour				
total_light_nrem_time_hour	total_rem_time_hour				
total_light_nrem_time_hour	total_deep_nrem_time_hour				
total_light_nrem_time_hour	total_light_nrem_time_hour				0.28347
total_light_nrem_time_hour	hourly_mean_pulse_rate	11	-0.35538	7	
			0.13084	0.70136	
total_light_nrem_time_hour	hourly_mean_rmssd	11	7	8	
				0.66466	
total_light_nrem_time_hour	hourly_median_rmssd	11	0.14773	8	
				0.24824	
total_light_nrem_time_hour	hourly_rmssd_variance	11	-0.38056	7	
hourly_mean_pulse_rate	Semantic Fluency				
hourly_mean_pulse_rate	MOCA				
hourly_mean_pulse_rate	Benton				
hourly_mean_pulse_rate	Letter Number Sequencing				
hourly_mean_pulse_rate	HVLT Recall				
hourly_mean_pulse_rate	HVLT Recognition				
hourly_mean_pulse_rate	HVLT Retention				
hourly_mean_pulse_rate	Symbol Digit				
hourly_mean_pulse_rate	STAI trait				
hourly_mean_pulse_rate	STAI state				
hourly_mean_pulse_rate	GDS				
hourly_mean_pulse_rate	QUIP				
hourly_mean_pulse_rate	ESS				
hourly_mean_pulse_rate	RBDSQ				
hourly_mean_pulse_rate	Systolic BP Drop				

hourly_mean_pulse_rate	SCOPA autonome				
hourly_mean_pulse_rate	Schwab England ADL				
hourly_mean_pulse_rate	UPDRS I				
hourly_mean_pulse_rate	UPDRS II				
hourly_mean_pulse_rate	UPDRS III OFF				
hourly_mean_pulse_rate	UPDRS III ON				
hourly_mean_pulse_rate	UPDRS IV				
hourly_mean_pulse_rate	LEDD				
hourly_mean_pulse_rate	sum_walking_minutes				
hourly_mean_pulse_rate	hourly_step_count_sum				
hourly_mean_pulse_rate	sleep_efficiency				
hourly_mean_pulse_rate	num_awakenings				
hourly_mean_pulse_rate	total_sleep_time_hour				
hourly_mean_pulse_rate	wake_after_sleep_onset_hour				
hourly_mean_pulse_rate	total_nrem_time_hour				
hourly_mean_pulse_rate	total_rem_time_hour				
hourly_mean_pulse_rate	total_deep_nrem_time_hour				
hourly_mean_pulse_rate	total_light_nrem_time_hour				
hourly_mean_pulse_rate	hourly_mean_pulse_rate			0.22699	
hourly_mean_pulse_rate	hourly_mean_rmssd	32	-0.21969	6	0.27249
hourly_mean_pulse_rate	hourly_median_rmssd	32	-0.19997	6	0.33065
hourly_mean_pulse_rate	hourly_rmssd_variance	29	-0.18728	8	
hourly_mean_rmssd	Semantic Fluency				
hourly_mean_rmssd	MOCA				
hourly_mean_rmssd	Benton				
hourly_mean_rmssd	Letter Number Sequencing				
hourly_mean_rmssd	HVLT Recall				
hourly_mean_rmssd	HVLT Recognition				
hourly_mean_rmssd	HVLT Retention				
hourly_mean_rmssd	Symbol Digit				
hourly_mean_rmssd	STAI trait				
hourly_mean_rmssd	STAI state				
hourly_mean_rmssd	GDS				
hourly_mean_rmssd	QUIP				
hourly_mean_rmssd	ESS				
hourly_mean_rmssd	RBDSQ				
hourly_mean_rmssd	Systolic BP Drop				
hourly_mean_rmssd	SCOPA autonome				
hourly_mean_rmssd	Schwab England ADL				
hourly_mean_rmssd	UPDRS I				
hourly_mean_rmssd	UPDRS II				
hourly_mean_rmssd	UPDRS III OFF				
hourly_mean_rmssd	UPDRS III ON				
hourly_mean_rmssd	UPDRS IV				

hourly_mean_rmssd	LEDD			
hourly_mean_rmssd	sum_walking_minutes			
hourly_mean_rmssd	hourly_step_count_sum			
hourly_mean_rmssd	sleep_efficiency			
hourly_mean_rmssd	num_awakenings			
hourly_mean_rmssd	total_sleep_time_hour			
hourly_mean_rmssd	wake_after_sleep_onset_hour			
hourly_mean_rmssd	total_nrem_time_hour			
hourly_mean_rmssd	total_rem_time_hour			
hourly_mean_rmssd	total_deep_nrem_time_hour			
hourly_mean_rmssd	total_light_nrem_time_hour			
hourly_mean_rmssd	hourly_mean_pulse_rate			
hourly_mean_rmssd	hourly_mean_rmssd		0.98849	
hourly_mean_rmssd	hourly_median_rmssd	32	4	3.6E-26
			0.48637	0.00746
hourly_mean_rmssd	hourly_rmssd_variance	29	8	6
hourly_median_rmssd	Semantic Fluency			
hourly_median_rmssd	MOCA			
hourly_median_rmssd	Benton			
hourly_median_rmssd	Letter Number Sequencing			
hourly_median_rmssd	HVLT Recall			
hourly_median_rmssd	HVLT Recognition			
hourly_median_rmssd	HVLT Retention			
hourly_median_rmssd	Symbol Digit			
hourly_median_rmssd	STAI trait			
hourly_median_rmssd	STAI state			
hourly_median_rmssd	GDS			
hourly_median_rmssd	QUIP			
hourly_median_rmssd	ESS			
hourly_median_rmssd	RBDSQ			
hourly_median_rmssd	Systolic BP Drop			
hourly_median_rmssd	SCOPA autonome			
hourly_median_rmssd	Schwab England ADL			
hourly_median_rmssd	UPDRS I			
hourly_median_rmssd	UPDRS II			
hourly_median_rmssd	UPDRS III OFF			
hourly_median_rmssd	UPDRS III ON			
hourly_median_rmssd	UPDRS IV			
hourly_median_rmssd	LEDD			
hourly_median_rmssd	sum_walking_minutes			
hourly_median_rmssd	hourly_step_count_sum			
hourly_median_rmssd	sleep_efficiency			
hourly_median_rmssd	num_awakenings			
hourly_median_rmssd	total_sleep_time_hour			
hourly_median_rmssd	wake_after_sleep_onset_hour			

hourly_median_rmssd	total_nrem_time_hour			
hourly_median_rmssd	total_rem_time_hour			
hourly_median_rmssd	total_deep_nrem_time_hour			
hourly_median_rmssd	total_light_nrem_time_hour			
hourly_median_rmssd	hourly_mean_pulse_rate			
hourly_median_rmssd	hourly_mean_rmssd			
hourly_median_rmssd	hourly_median_rmssd		0.49839	0.00592
hourly_median_rmssd	hourly_rmssd_variance	29	5	9
hourly_rmssd_variance	Semantic Fluency			
hourly_rmssd_variance	MOCA			
hourly_rmssd_variance	Benton			
hourly_rmssd_variance	Letter Number Sequencing			
hourly_rmssd_variance	HVLT Recall			
hourly_rmssd_variance	HVLT Recognition			
hourly_rmssd_variance	HVLT Retention			
hourly_rmssd_variance	Symbol Digit			
hourly_rmssd_variance	STAI trait			
hourly_rmssd_variance	STAI state			
hourly_rmssd_variance	GDS			
hourly_rmssd_variance	QUIP			
hourly_rmssd_variance	ESS			
hourly_rmssd_variance	RBDSQ			
hourly_rmssd_variance	Systolic BP Drop			
hourly_rmssd_variance	SCOPA autonome			
hourly_rmssd_variance	Schwab England ADL			
hourly_rmssd_variance	UPDRS I			
hourly_rmssd_variance	UPDRS II			
hourly_rmssd_variance	UPDRS III OFF			
hourly_rmssd_variance	UPDRS III ON			
hourly_rmssd_variance	UPDRS IV			
hourly_rmssd_variance	LEDD			
hourly_rmssd_variance	sum_walking_minutes			
hourly_rmssd_variance	hourly_step_count_sum			
hourly_rmssd_variance	sleep_efficiency			
hourly_rmssd_variance	num_awakenings			
hourly_rmssd_variance	total_sleep_time_hour			
hourly_rmssd_variance	wake_after_sleep_onset_hour			
hourly_rmssd_variance	total_nrem_time_hour			
hourly_rmssd_variance	total_rem_time_hour			
hourly_rmssd_variance	total_deep_nrem_time_hour			
hourly_rmssd_variance	total_light_nrem_time_hour			
hourly_rmssd_variance	hourly_mean_pulse_rate			
hourly_rmssd_variance	hourly_mean_rmssd			
hourly_rmssd_variance	hourly_median_rmssd			
hourly_rmssd_variance	hourly_rmssd_variance			

Supplemental Table 6: Association between time progression over whole observation period

Results of the Pearson correlation analysis between the progression markers of the clinical measures and the timeseries features of the digital measures. This analysis considers the whole observation timeframe. The Pearson's r coefficient, the associated p-value, and the sample size are displayed.

clinical	digital	pearson r	p-value	N	sign
cognitive_slope_PC	PC_0	0.073888	0.397984	133	
cognitive_slope_PC	PC_1	-0.11406	0.191133	133	
cognitive_slope_PC	PC_2	-0.08416	0.335502	133	
cognitive_slope_PC	PC_3	0.071408	0.414052	133	
cognitive_slope_PC	PC_4	0.039295	0.653383	133	
cognitive_slope_PC	PC_5	0.137387	0.114806	133	
cognitive_slope_PC	PC_6	-0.00807	0.926535	133	
cognitive_slope_PC	PC_7	0.050218	0.565938	133	
cognitive_slope_PC	PC_8	0.049587	0.570839	133	
cognitive_slope_PC	PC_9	-0.02763	0.752222	133	
motor_slope_PC	PC_0	0.014569	0.867808	133	
motor_slope_PC	PC_1	0.067002	0.443516	133	
motor_slope_PC	PC_2	-0.12011	0.168494	133	
motor_slope_PC	PC_3	0.071613	0.412706	133	
motor_slope_PC	PC_4	0.159201	0.067196	133	
motor_slope_PC	PC_5	0.263544	0.002177	133	*
motor_slope_PC	PC_6	0.206735	0.016962	133	
motor_slope_PC	PC_7	0.227411	0.008477	133	*
motor_slope_PC	PC_8	-0.04705	0.590707	133	
motor_slope_PC	PC_9	-0.0459	0.599842	133	
autonome_slope_PC	PC_0	0.044563	0.607798	135	
autonome_slope_PC	PC_1	0.055712	0.521008	135	
autonome_slope_PC	PC_2	0.062071	0.474496	135	
autonome_slope_PC	PC_3	-0.10705	0.216536	135	
autonome_slope_PC	PC_4	0.099087	0.252872	135	
autonome_slope_PC	PC_5	-0.1641	0.057195	135	
autonome_slope_PC	PC_6	0.043707	0.614718	135	
autonome_slope_PC	PC_7	0.217734	0.011186	135	
autonome_slope_PC	PC_8	0.020598	0.812563	135	
autonome_slope_PC	PC_9	-0.22654	0.008239	135	*
daily_slope_PC	PC_0	-0.02267	0.794068	135	
daily_slope_PC	PC_1	0.110305	0.202807	135	
daily_slope_PC	PC_2	-0.09819	0.257217	135	

daily_slope_PC	PC_3	0.034222	0.69355	135	
daily_slope_PC	PC_4	0.257954	0.002523	135	*
daily_slope_PC	PC_5	0.173094	0.044681	135	
daily_slope_PC	PC_6	0.206027	0.016515	135	
daily_slope_PC	PC_7	0.165651	0.054848	135	
daily_slope_PC	PC_8	-0.11961	0.167041	135	
daily_slope_PC	PC_9	-0.17325	0.044487	135	
neuropsychiatric_slope_PC	PC_0	0.060311	0.487135	135	
neuropsychiatric_slope_PC	PC_1	0.051679	0.551666	135	
neuropsychiatric_slope_PC	PC_2	-0.08153	0.34719	135	
neuropsychiatric_slope_PC	PC_3	-0.00226	0.979209	135	
neuropsychiatric_slope_PC	PC_4	0.209238	0.01487	135	
neuropsychiatric_slope_PC	PC_5	0.148555	0.085514	135	
neuropsychiatric_slope_PC	PC_6	0.184589	0.032094	135	
neuropsychiatric_slope_PC	PC_7	0.07275	0.40173	135	
neuropsychiatric_slope_PC	PC_8	0.060499	0.485782	135	
neuropsychiatric_slope_PC	PC_9	-0.08387	0.333501	135	
medication_slope_PC	PC_0	-0.24964	0.004179	130	*
medication_slope_PC	PC_1	-0.00281	0.974651	130	
medication_slope_PC	PC_2	-0.01422	0.872399	130	
medication_slope_PC	PC_3	-0.12259	0.16468	130	
medication_slope_PC	PC_4	0.118107	0.180794	130	
medication_slope_PC	PC_5	-0.02314	0.793855	130	
medication_slope_PC	PC_6	-0.0268	0.762115	130	
medication_slope_PC	PC_7	0.160939	0.067369	130	
medication_slope_PC	PC_8	0.155	0.078263	130	
medication_slope_PC	PC_9	-0.05435	0.539125	130	