# $lme\_mods$

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## Packages & Setup

```
# install.packages(c("tidyverse", "purrr", "R.matlab", "readxl", "dplyr"))
library(readxl);
library(purrr)
library(tidyverse);
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr 1.1.4
                      v readr 2.1.5
## v forcats 1.0.0 v stringr 1.5.1
## v ggplot2 3.5.0 v tibble 3.2.1
## v lubridate 1.9.3 v tidyr
                                  1.3.1
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag() masks stats::lag()
## i Use the conflicted package (<a href="http://conflicted.r-lib.org/">http://conflicted.r-lib.org/</a>) to force all conflicts to become error
library(tibble)
library(knitr);
library(gtsummary)
## #BlackLivesMatter
library(kableExtra)
##
## Attaching package: 'kableExtra'
## The following object is masked from 'package:dplyr':
##
##
      group_rows
library(lme4)
## Loading required package: Matrix
## Attaching package: 'Matrix'
```

```
##
## The following objects are masked from 'package:tidyr':
##
## expand, pack, unpack
```

#### GTSUMMARY THEME

```
# my_theme <-
  list(
#
      "tbl_summary-str:default_con_type" = "continuous2",
#
      "tbl_summary-str:continuous_stat" = c(
#
        "\{median\} (\{p25\} - \{p75\})",
#
        "{mean} ({sd})",
        "{min} - {max}"
#
#
      ),
      "tbl_summary-str:categorical_stat" = "{n} / {N} ({p}%)",
#
#
      "style_number-arg:big.mark" = "",
#
      "tbl_summary-fn:percent_fun" = function(x) style_percent(x, digits = 3)
#
  )
# my_theme <-
# list()
\# \ gtsummary::set\_gtsummary\_theme(my\_theme)
gtsummary::set_gtsummary_theme(theme_gtsummary_journal("jama"))
## Setting theme 'JAMA'
## Setting theme 'JAMA'
# reset_gtsummary_theme()
```

#### load table

```
# excel_dir <-"M:/jsalminen/GitHub/par_EEGProcessing/src/_data/MIM_dataset/_studies/04162024_MIM_YA0AN89
excel_dir <-"M:/jsalminen/GitHub/par_EEGProcessing/src/_data/MIM_dataset/_studies/04232024_MIM_YA0AN89_
eegt <- read_excel(excel_dir,sheet="Sheet1")</pre>
```

#### get unique entries

```
clusters = unique(eegt$cluster_id);
subjects = unique(eegt$subj_char);
groups = unique(eegt$group_char);
kin_measures = c('mean_APexc_COV', 'mean_APexc_mean', 'mean_MLexc_COV', 'mean_MLexc_mean', 'mean_StepDur','eeg_measures = c('theta_avg_power', 'alpha_avg_power', 'beta_avg_power', 'aperiodic_exp', 'aperiodic_offset
```

get speeds only

```
eegt <- filter_at(eegt,vars('cond_char'), any_vars(. %in% c('0.25','0.5','0.75','1.0')))
flat_speeds = unique(eegt$cond_char)
eegt$cond_char <- as.numeric(eegt$cond_char)
eegt$speed_cond_num <- as.numeric(eegt$cond_char)
eegt <- mutate(eegt,across(c('subj_char'), factor))</pre>
```

### get terrains only (if applicable)

```
# eegt <- filter_at(eegt,vars('cond_char'), any_vars(. %in% c('flat','low','med','high')))
# eegt <- filter_at(eegt,vars('cond_char'), any_vars(. %in% c('high')))
# eegt$terr_ord_speed <- cut(eegt$speed_ms, 4, ordered = TRUE)</pre>
```

## convert speeds to ordered & groups to factors

```
eegt <- mutate(eegt,across(c('group char'), factor))</pre>
eegt$speed_ord <- cut(eegt$cond_char, 4, ordered = TRUE)</pre>
eegt <- mutate(eegt,across(c('cond_char'), factor))</pre>
head(eegt)
## # A tibble: 6 x 139
     speed_ms subj_id subj_cl_ind subj_char comp_id design_id cond_id cond_char
##
##
        <dbl> <chr> <dbl> <fct>
                                              <dbl> <chr>
                                                             <chr>
                                                                       <fct>
         1.2 5
                                                  4 2
                                                                       0.25
## 1
                                1 H1011
                                                               1
## 2
        0.69 8
                                2 H1017
                                                  3 2
                                                                       0.25
                                                              1
## 3
        0.51 10
                                3 H1019
                                                  4 2
                                                                       0.25
                                                              1
```

```
0.76 11
                                                  6 2
                                                                      0.25
                                4 H1020
                                                             1
        0.59 12
                                                  6 2
                                                                      0.25
## 5
                                5 H1022
                                                              1
## 6
        0.8 15
                                6 H1027
                                                  3 2
                                                              1
                                                                      0.25
## # i 131 more variables: group_id <chr>, cluster_id <chr>, aperiodic_exp <dbl>,
       aperiodic_offset <dbl>, central_freq_1 <dbl>, central_freq_2 <dbl>,
## #
      central_freq_3 <dbl>, power_1 <dbl>, power_2 <dbl>, power_3 <dbl>,
## #
## #
      r_squared <dbl>, theta_avg_power <dbl>, alpha_avg_power <dbl>,
## #
      beta avg power <dbl>, theta 1 <dbl>, theta 2 <dbl>, theta 3 <dbl>,
## #
      theta_4 <dbl>, theta_5 <dbl>, theta_6 <dbl>, theta_7 <dbl>, theta_8 <dbl>,
## #
       'alpha_ 1' <dbl>, 'alpha_ 2' <dbl>, 'alpha_ 3' <dbl>, 'alpha_ 4' <dbl>, ...
```

eegt\$group\_speed\_code = paste(eegt\$group\_char,eegt\$cond\_char,sep="\_")

## LME EEG ~ 1+kin+group+kin:group

Changes in	mean_APexc_COV	for Cluster:	3						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.98 (0.62 to 1.3)	< 0.001	< 0.001	1.1 (0.23 to 2.1)	0.014	0.055	0.91 (0.39 to 1.4)	< 0.001	0.002
mean_APexc_COV	-0.02 (-0.03 to 0.00)	0.047	0.051	0.01 (-0.02 to 0.03)	0.61	0.84	0.00 (-0.01 to 0.02)	0.62	0.73
group_char		0.002	0.004		0.81	0.84		0.33	0.66
H1000's	_			_			_		
H2000's	-0.96 (-1.5 to -0.41)			0.33 (-1.0 to 1.7)			0.45 (-0.31 to 1.2)		
H3000's	-0.27 (-0.81 to 0.26)			0.41 (-0.93 to 1.8)			-0.12 (-0.88 to 0.64)		
mean_APexc_COV * group_char		0.051	0.051		0.84	0.84		0.73	0.73
mean_APexc_COV * H2000's	0.03 (0.00 to 0.05)			0.00 (-0.03 to 0.03)			-0.01 (-0.03 to 0.02)		
mean_APexc_COV * H3000's	0.01 (-0.01 to 0.03)			-0.01 (-0.04 to 0.02)			0.00 (-0.02 to 0.02)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.37 (NA to NA)			0.23 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_APexc_mean	for Cluster:	3						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.95 (0.63 to 1.3)	< 0.001	< 0.001	1.0 (0.15 to 1.9)	0.022	0.087	0.79 (0.31 to 1.3)	0.001	0.005
mean_APexc_mean	-4.1 (-7.5 to -0.65)	0.020	0.039	4.5 (-0.83 to 9.7)	0.10	0.20	3.3 (0.04 to 6.5)	0.047	0.084
group_char		0.037	0.049		0.80	0.80		0.95	0.95
H1000's	_			_			_		
H2000's	-0.63 (-1.1 to -0.15)			0.03 (-1.2 to 1.3)			0.09 (-0.63 to 0.80)		
H3000's	-0.29 (-0.75 to 0.17)			0.39 (-0.87 to 1.6)			-0.02 (-0.72 to 0.68)		
mean_APexc_mean * group_char		0.84	0.84		0.17	0.23		0.063	0.084
mean_APexc_mean * H2000's	1.8 (-4.3 to 7.9)			8.3 (-1.2 to 18)			6.9 (1.1 to 13)		
mean_APexc_mean * H3000's	0.95 (-4.8 to 6.7)			-0.76 (-9.7 to 8.2)			1.3 (-4.2 to 6.7)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.36 (NA to NA)			0.22 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	3						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.81 (0.46 to 1.2)	< 0.001	< 0.001	1.5 (0.58 to 2.4)	0.001	0.005	1.1 (0.64 to 1.6)	< 0.001	< 0.001
mean_MLexc_COV	-0.01 (-0.02 to 0.01)	0.48	0.48	-0.02 (-0.04 to 0.01)	0.25	0.51	-0.01 (-0.03 to 0.00)	0.16	0.32
group_char		0.021	0.042		0.92	0.92		0.56	0.71
H1000's	_			_			_		
H2000's	-0.68 (-1.2 to -0.20)			0.21 (-1.1 to 1.5)			0.37 (-0.34 to 1.1)		
H3000's	-0.39 (-0.87 to 0.10)			0.24 (-1.0 to 1.5)			0.07 (-0.64 to 0.79)		
mean_MLexc_COV * group_char		0.40	0.48		0.80	0.92		0.71	0.71
mean_MLexc_COV * H2000's	0.01 (-0.01 to 0.03)			0.01 (-0.02 to 0.05)			0.00 (-0.02 to 0.02)		
mean_MLexc_COV * H3000's	0.01 (-0.01 to 0.04)			0.00 (-0.03 to 0.04)			-0.01 (-0.03 to 0.01)		
subj_char.sd(Intercept)	0.56 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.37 (NA to NA)			0.23 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean MLexc mean	for Cluster:	3						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.90 (0.58 to 1.2)	< 0.001	< 0.001	1.0 (0.15 to 1.9)	0.021	0.085	0.72 (0.24 to 1.2)	0.003	0.010
mean_MLexc_mean	-2.1 (-4.4 to 0.16)	0.069	0.091	2.9 (-0.69 to 6.5)	0.11	0.23	3.1 (0.94 to 5.2)	0.005	0.010
group_char		0.044	0.088		0.81	0.84		0.44	0.59
H1000's	_			_			_		
H2000's	-0.57 (-1.0 to -0.12)			0.33 (-0.92 to 1.6)			0.40 (-0.29 to 1.1)		
H3000's	-0.27 (-0.73 to 0.18)			0.38 (-0.88 to 1.6)			0.00 (-0.69 to 0.70)		
mean_MLexc_mean * group_char		0.76	0.76		0.84	0.84		0.89	0.89
mean_MLexc_mean * H2000's	0.92 (-1.9 to 3.8)			0.13 (-4.4 to 4.6)			-0.67 (-3.4 to 2.0)		
mean_MLexc_mean * H3000's	1.1 (-1.9 to 4.1)			-1.1 (-5.8 to 3.7)			-0.36 (-3.2 to 2.5)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.36 (NA to NA)			0.22 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean StepDur	for Cluster:	3						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.90 (0.61 to 1.2)	< 0.001	< 0.001	1.1 (0.23 to 1.9)	0.012	0.049	0.83 (0.37 to 1.3)	< 0.001	0.002
mean_StepDur	-0.19 (-0.34 to -0.04)	0.015	0.029	0.20 (-0.04 to 0.44)	0.10	0.16	0.15 (0.01 to 0.29)	0.040	0.054
group_char		0.030	0.040		0.98	0.98		0.26	0.26
H1000's	_			_			_		
H2000's	-0.57 (-1.0 to -0.12)			0.10 (-1.2 to 1.4)			0.21 (-0.49 to 0.90)		
H3000's	-0.04 (-0.51 to 0.44)			-0.01 (-1.3 to 1.3)			-0.41 (-1.1 to 0.30)		
mean_StepDur * group_char		0.33	0.33		0.12	0.16		0.004	0.008
mean_StepDur * H2000's	0.04 (-0.27 to 0.36)			0.40 (-0.09 to 0.89)			0.24 (-0.05 to 0.54)		
mean_StepDur * H3000's	-0.30 (-0.72 to 0.12)			0.53 (-0.13 to 1.2)			0.64 (0.24 to 1.0)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.36 (NA to NA)			0.22 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	3						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.84 (0.56 to 1.1)	< 0.001	< 0.001	1.1 (0.28 to 1.9)	0.009	0.036	0.85 (0.39 to 1.3)	< 0.001	0.001
mean_UDexc_COV	-0.01 (-0.02 to 0.00)	0.057	0.076	0.01 (0.00 to 0.03)	0.15	0.31	0.01 (0.00 to 0.02)	0.050	0.10
group_char		0.033	0.065		0.87	0.96		0.44	0.58
H1000's	_			_			_		
H2000's	-0.57 (-0.99 to -0.14)			0.31 (-0.93 to 1.5)			0.34 (-0.35 to 1.0)		
H3000's	-0.21 (-0.64 to 0.22)			0.26 (-0.99 to 1.5)			-0.12 (-0.81 to 0.57)		
mean_UDexc_COV * group_char		0.81	0.81		0.96	0.96		0.77	0.77
mean_UDexc_COV * H2000's	0.01 (-0.01 to 0.02)			0.00 (-0.02 to 0.03)			0.00 (-0.01 to 0.02)		
mean_UDexc_COV * H3000's	0.00 (-0.01 to 0.02)			0.00 (-0.02 to 0.03)			0.01 (-0.01 to 0.02)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.37 (NA to NA)			0.23 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	3						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.64 (0.35 to 0.94)	< 0.001	< 0.001	1.4 (0.56 to 2.2)	0.001	0.004	1.2 (0.71 to 1.6)	< 0.001	< 0.001
mean_UDexc_mean	3.4 (-2.8 to 9.6)	0.29	0.38	-6.2 (-16 to 3.6)	0.21	0.43	-8.3 (-14 to -2.6)	0.004	0.009
group_char		0.056	0.11		0.84	0.99		0.50	0.67
H1000's	_			_			_		
H2000's	-0.53 (-0.96 to -0.10)			0.35 (-0.89 to 1.6)			0.38 (-0.30 to 1.1)		
H3000's	-0.24 (-0.67 to 0.19)			0.30 (-0.95 to 1.5)			0.05 (-0.63 to 0.74)		
mean_UDexc_mean * group_char		0.89	0.89		0.99	0.99		0.73	0.73
mean_UDexc_mean * H2000's	0.76 (-8.1 to 9.6)			0.88 (-13 to 15)			-0.47 (-8.6 to 7.7)		
mean_UDexc_mean * H3000's	2.1 (-6.7 to 11)			-0.14 (-14 to 14)			-3.0 (-11 to 5.1)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.37 (NA to NA)			0.22 (NA to NA)		
1tcsiddai.sdObsci vation	0.20 (1111 10 1111)			0.01 (1111 00 1111)			0.22 (1111 00 1111)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	3						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.87 (0.60 to 1.2)	< 0.001	< 0.001	1.1 (0.28 to 1.9)	0.009	0.035	0.86 (0.40 to 1.3)	< 0.001	< 0.001
mean_StanceDur	-0.12 (-0.21 to -0.03)	0.011	0.022	0.11 (-0.03 to 0.26)	0.12	0.23	0.09 (0.01 to 0.18)	0.038	0.050
group_char		0.025	0.033		0.96	0.96		0.28	0.28
H1000's	_			_			_		
H2000's	-0.56 (-0.99 to -0.14)			0.18 (-1.1 to 1.4)			0.26 (-0.42 to 0.94)		
H3000's	-0.08 (-0.52 to 0.37)			0.07 (-1.2 to 1.3)			-0.32 (-1.0 to 0.37)		
mean_StanceDur * group_char		0.35	0.35		0.17	0.23		0.006	0.012
mean_StanceDur * H2000's	0.03 (-0.16 to 0.21)			0.21 (-0.08 to 0.50)			0.12 (-0.05 to 0.30)		
mean_StanceDur * H3000's	-0.17 (-0.42 to 0.08)			0.30 (-0.09 to 0.68)			0.37 (0.13 to 0.60)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.36 (NA to NA)			0.22 (NA to NA)		
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CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	3						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.90 (0.61 to 1.2)	< 0.001	< 0.001	1.1 (0.23 to 1.9)	0.012	0.049	0.83 (0.37 to 1.3)	< 0.001	0.002
mean_GaitCycleDur	-0.10 (-0.17 to -0.02)	0.014	0.029	0.10 (-0.02 to 0.22)	0.11	0.16	0.07 (0.00 to 0.15)	0.041	0.054
group_char		0.029	0.039		0.99	0.99		0.27	0.27
H1000's	_			_			_		
H2000's	-0.57 (-1.0 to -0.12)			0.10 (-1.2 to 1.4)			0.21 (-0.49 to 0.90)		
H3000's	-0.04 (-0.51 to 0.44)			-0.01 (-1.3 to 1.3)			-0.41 (-1.1 to 0.31)		
mean_GaitCycleDur * group_char		0.33	0.33		0.12	0.16		0.004	0.009
mean_GaitCycleDur * H2000's	0.02 (-0.13 to 0.18)			0.20 (-0.05 to 0.44)			0.12 (-0.03 to 0.27)		
mean_GaitCycleDur * H3000's	-0.15 (-0.36 to 0.06)			0.26 (-0.07 to 0.59)			0.32 (0.12 to 0.51)		
subj_char.sd(Intercept)	0.57 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.36 (NA to NA)			0.22 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	3						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.66 (0.38 to 0.94)	< 0.001	< 0.001	1.4 (0.57 to 2.2)	< 0.001	0.004	1.1 (0.66 to 1.6)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.27 (-0.20 to 0.74)	0.26	0.35	-0.62 (-1.4 to 0.11)	0.10	0.19	-0.61 (-1.0 to -0.18)	0.006	0.011
group_char		0.047	0.093		0.80	0.97		0.42	0.56
H1000's	_			_			_		
H2000's	-0.52 (-0.93 to -0.11)			0.40 (-0.83 to 1.6)			0.43 (-0.24 to 1.1)		
H3000's	-0.24 (-0.65 to 0.17)			0.29 (-0.93 to 1.5)			0.06 (-0.61 to 0.73)		
mean_PeakUpDownVel_mean * group_char		0.85	0.85		0.97	0.97		0.75	0.75
mean_PeakUpDownVel_mean * H2000's	0.01 (-0.66 to 0.68)			-0.05 (-1.1 to 1.0)			-0.17 (-0.78 to 0.44)		
mean_PeakUpDownVel_mean * H3000's	0.17 (-0.49 to 0.83)			0.07 (-0.96 to 1.1)			-0.23 (-0.83 to 0.38)		
subj_char.sd(Intercept)	0.56 (NA to NA)			1.8 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.37 (NA to NA)			0.21 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	4						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.55 (0.13 to 0.97)	0.010	0.038	3.3 (2.1 to 4.6)	< 0.001	< 0.001	2.1 (1.4 to 2.8)	< 0.001	< 0.001
mean_APexc_COV	-0.01 (-0.02 to 0.01)	0.48	0.48	0.03 (-0.02 to 0.07)	0.23	0.47	0.02 (-0.01 to 0.04)	0.19	0.26
group_char		0.27	0.38		0.44	0.49		0.13	0.26
H1000's	_			_			_		
H2000's	-0.40 (-1.1 to 0.34)			0.54 (-1.6 to 2.7)			1.1 (-0.04 to 2.3)		
H3000's	-0.47 (-1.1 to 0.13)			-0.82 (-2.6 to 0.97)			0.68 (-0.29 to 1.6)		
mean_APexc_COV * group_char		0.28	0.38		0.49	0.49		0.59	0.59
mean_APexc_COV * H2000's	0.01 (-0.02 to 0.03)			-0.04 (-0.11 to 0.03)			-0.02 (-0.06 to 0.02)		
mean_APexc_COV * H3000's	0.01 (0.00 to 0.03)			0.00 (-0.06 to 0.05)			-0.01 (-0.04 to 0.02)		
subj_char.sd(Intercept)	0.80 (NA to NA)			2.5 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.65 (NA to NA)			0.36 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean APexc mean	for Cluster:	4						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.40 (0.02 to 0.78)	0.039	0.16	3.0 (1.8 to 4.1)	< 0.001	< 0.001	2.1 (1.5 to 2.7)	< 0.001	< 0.001
mean_APexc_mean	1.1 (-2.2 to 4.4)	0.53	0.57	15 (6.4 to 23)	< 0.001	0.001	5.2 (0.45 to 9.9)	0.032	0.064
group_char		0.57	0.57		0.78	0.94		0.47	0.47
H1000's	_			_			_		
H2000's	-0.26 (-0.87 to 0.35)			-0.14 (-2.0 to 1.7)			0.59 (-0.41 to 1.6)		
H3000's	-0.27 (-0.82 to 0.28)			-0.58 (-2.2 to 1.1)			0.39 (-0.50 to 1.3)		
mean_APexc_mean * group_char		0.42	0.57		0.94	0.94		0.24	0.32
mean_APexc_mean * H2000's	-1.1 (-6.7 to 4.6)			2.0 (-13 to 17)			6.0 (-2.0 to 14)		
mean_APexc_mean * H3000's	3.0 (-2.5 to 8.5)			2.1 (-12 to 16)			5.1 (-2.7 to 13)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.61 (NA to NA)			0.33 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	4						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.37 (-0.03 to 0.76)	0.070	0.28	3.8 (2.7 to 5.0)	< 0.001	< 0.001	2.3 (1.7 to 3.0)	< 0.001	< 0.001
mean_MLexc_COV	0.01 (-0.01 to 0.02)	0.40	0.67	-0.01 (-0.05 to 0.04)	0.80	0.80	0.00 (-0.02 to 0.03)	0.73	0.73
group_char		0.50	0.67		0.36	0.47		0.038	0.076
H1000's	_			_			_		
H2000's	-0.36 (-0.99 to 0.26)			0.51 (-1.4 to 2.4)			1.3 (0.30 to 2.3)		
H3000's	-0.23 (-0.79 to 0.33)			-0.82 (-2.5 to 0.86)			0.68 (-0.23 to 1.6)		
mean_MLexc_COV * group_char		0.86	0.86		0.13	0.26		0.11	0.14
mean_MLexc_COV * H2000's	0.00 (-0.02 to 0.03)			-0.05 (-0.11 to 0.01)			-0.04 (-0.07 to 0.00)		
mean_MLexc_COV * H3000's	0.01 (-0.01 to 0.03)			0.01 (-0.05 to 0.06)			-0.01 (-0.04 to 0.02)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.23 (NA to NA)			0.65 (NA to NA)			0.35 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_mean	for Cluster:	4						
-	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.56 (0.18 to 0.94)	0.004	0.016	3.3 (2.1 to 4.4)	< 0.001	< 0.001	2.2 (1.6 to 2.8)	< 0.001	< 0.001
mean_MLexc_mean	-1.2 (-3.5 to 1.0)	0.28	0.56	6.1 (0.18 to 12)	0.044	0.087	2.5 (-0.70 to 5.7)	0.13	0.25
group_char		0.47	0.56		0.58	0.78		0.46	0.46
H1000's	_			_			_		
H2000's	-0.33 (-0.93 to 0.27)			-0.29 (-2.1 to 1.5)			0.63 (-0.36 to 1.6)		
H3000's	-0.28 (-0.82 to 0.26)			-0.85 (-2.5 to 0.77)			0.29 (-0.59 to 1.2)		
mean_MLexc_mean * group_char		0.56	0.56		0.93	0.93		0.44	0.46
mean_MLexc_mean * H2000's	0.30 (-2.6 to 3.2)			0.55 (-7.1 to 8.2)			1.8 (-2.3 to 5.9)		
mean_MLexc_mean * H3000's	1.4 (-1.5 to 4.3)			1.4 (-6.2 to 9.0)			2.6 (-1.4 to 6.7)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.62 (NA to NA)			0.33 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.62 (NA to NA)			0.33 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	4						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.38 (0.02 to 0.74)	0.039	0.15	3.1 (2.0 to 4.2)	< 0.001	< 0.001	2.2 (1.6 to 2.8)	< 0.001	< 0.001
mean_StepDur	0.08 (-0.07 to 0.24)	0.28	0.57	0.68 (0.29 to 1.1)	< 0.001	0.001	0.18 (-0.03 to 0.39)	0.10	0.13
group_char		0.87	0.87		0.52	0.52		0.62	0.62
H1000's	_			_			_		
H2000's	-0.16 (-0.77 to 0.45)			-0.48 (-2.3 to 1.4)			0.45 (-0.54 to 1.4)		
H3000's	-0.08 (-0.63 to 0.47)			-0.96 (-2.6 to 0.69)			0.00 (-0.89 to 0.89)		
mean_StepDur * group_char		0.53	0.71		0.27	0.37		0.002	0.003
mean_StepDur * H2000's	-0.19 (-0.53 to 0.15)			0.53 (-0.34 to 1.4)			0.51 (0.04 to 0.99)		
mean_StepDur * H3000's	-0.09 (-0.45 to 0.26)			0.59 (-0.31 to 1.5)			0.82 (0.32 to 1.3)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.60 (NA to NA)			0.33 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	4						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.46 (0.11 to 0.82)	0.011	0.043	3.4 (2.3 to 4.5)	< 0.001	< 0.001	2.2 (1.6 to 2.8)	< 0.001	< 0.001
mean_UDexc_COV	0.00 (-0.01 to 0.01)	0.96	0.96	0.03 (0.00 to 0.05)	0.045	0.090	0.01 (0.00 to 0.02)	0.10	0.19
group_char		0.62	0.96		0.50	0.67		0.35	0.35
H1000's	_			_			_		
H2000's	-0.27 (-0.85 to 0.31)			-0.17 (-1.9 to 1.6)			0.70 (-0.25 to 1.6)		
H3000's	-0.18 (-0.70 to 0.35)			-0.93 (-2.5 to 0.68)			0.23 (-0.62 to 1.1)		
mean_UDexc_COV * group_char		0.84	0.96		0.76	0.76		0.18	0.25
mean_UDexc_COV * H2000's	0.00 (-0.02 to 0.01)			0.00 (-0.04 to 0.04)			0.01 (-0.01 to 0.03)		
mean_UDexc_COV * H3000's	0.00 (-0.01 to 0.02)			0.01 (-0.03 to 0.05)			0.02 (0.00 to 0.04)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.63 (NA to NA)			0.34 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	4						
· · · · · · · · · · · · · · · · · · ·	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.39 (0.02 to 0.75)	0.039	0.16	4.2 (3.1 to 5.3)	< 0.001	< 0.001	2.6 (2.0 to 3.2)	< 0.001	< 0.001
mean_UDexc_mean	3.0 (-3.3 to 9.2)	0.35	0.65	-18 (-34 to -1.0)	0.037	0.074	-8.1 (-17 to 0.58)	0.067	0.092
group_char		0.49	0.65		0.77	0.86		0.069	0.092
H1000's	_			_			_		
H2000's	-0.36 (-0.96 to 0.23)			-0.10 (-1.9 to 1.7)			0.98 (0.03 to 1.9)		
H3000's	-0.15 (-0.67 to 0.38)			-0.57 (-2.2 to 1.0)			0.82 (-0.03 to 1.7)		
mean_UDexc_mean * group_char		0.88	0.88		0.86	0.86		0.12	0.12
mean_UDexc_mean * H2000's	1.7 (-7.9 to 11)			-1.9 (-27 to 24)			-6.0 (-19 to 7.4)		
mean_UDexc_mean * H3000's	-0.61 (-9.1 to 7.9)			-6.1 (-29 to 16)			-12 (-24 to -0.62)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.62 (NA to NA)			0.33 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	4						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.40 (0.04 to 0.75)	0.027	0.11	3.2 (2.2 to 4.3)	< 0.001	< 0.001	2.2 (1.7 to 2.8)	< 0.001	< 0.001
mean_StanceDur	0.05 (-0.04 to 0.14)	0.29	0.58	0.41 (0.18 to 0.65)	< 0.001	< 0.001	0.11 (-0.02 to 0.23)	0.10	0.13
group_char		0.82	0.82		0.56	0.56		0.51	0.51
H1000's	_			_			_		
H2000's	-0.19 (-0.77 to 0.40)			-0.35 (-2.1 to 1.4)			0.56 (-0.40 to 1.5)		
H3000's	-0.08 (-0.61 to 0.44)			-0.87 (-2.5 to 0.72)			0.12 (-0.74 to 0.98)		
mean_StanceDur * group_char		0.49	0.65		0.36	0.48		0.003	0.005
mean_StanceDur * H2000's	-0.11 (-0.31 to 0.09)			0.26 (-0.25 to 0.77)			0.28 (0.00 to 0.56)		
mean_StanceDur * H3000's	-0.07 (-0.28 to 0.14)			0.33 (-0.20 to 0.85)			0.47 (0.18 to 0.76)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.60 (NA to NA)			0.33 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	4						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.38 (0.02 to 0.74)	0.039	0.16	3.1 (2.0 to 4.2)	< 0.001	< 0.001	2.2 (1.6 to 2.8)	< 0.001	< 0.001
mean_GaitCycleDur	0.04 (-0.03 to 0.12)	0.28	0.56	0.34 (0.15 to 0.54)	< 0.001	0.001	0.09 (-0.02 to 0.20)	0.10	0.13
group_char		0.87	0.87		0.52	0.52		0.62	0.62
H1000's	_			_			_		
H2000's	-0.16 (-0.77 to 0.45)			-0.48 (-2.3 to 1.4)			0.45 (-0.53 to 1.4)		
H3000's	-0.08 (-0.63 to 0.47)			-0.96 (-2.6 to 0.69)			0.00 (-0.89 to 0.89)		
mean_GaitCycleDur * group_char		0.53	0.71		0.28	0.37		0.002	0.003
mean_GaitCycleDur * H2000's	-0.09 (-0.26 to 0.08)			0.26 (-0.17 to 0.69)			0.26 (0.02 to 0.49)		
mean_GaitCycleDur * H3000's	-0.05 (-0.22 to 0.13)			0.30 (-0.15 to 0.75)			0.41 (0.16 to 0.65)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.60 (NA to NA)			0.33 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	4						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.08 to 0.78)	0.016	0.063	4.1 (3.0 to 5.2)	< 0.001	< 0.001	2.5 (1.9 to 3.1)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.11 (-0.35 to 0.57)	0.64	0.85	-1.5 (-2.7 to -0.27)	0.016	0.032	-0.60 (-1.2 to 0.02)	0.059	0.059
group_char		0.47	0.85		0.74	0.85		0.053	0.059
H1000's	_			_			_		
H2000's	-0.35 (-0.92 to 0.22)			-0.02 (-1.8 to 1.7)			1.0 (0.08 to 1.9)		
H3000's	-0.19 (-0.70 to 0.32)			-0.57 (-2.1 to 1.0)			0.83 (0.00 to 1.7)		
mean_PeakUpDownVel_mean * group_char		0.93	0.93		0.85	0.85		0.034	0.059
mean_PeakUpDownVel_mean * H2000's	0.13 (-0.59 to 0.84)			-0.44 (-2.3 to 1.4)			-0.67 (-1.6 to 0.31)		
mean_PeakUpDownVel_mean * H3000's	0.10 (-0.53 to 0.74)			-0.42 (-2.1 to 1.2)			-1.1 (-2.0 to -0.28)		
subj_char.sd(Intercept)	0.81 (NA to NA)			2.5 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.24 (NA to NA)			0.61 (NA to NA)			0.32 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	5						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.96 (0.50 to 1.4)	< 0.001	< 0.001	2.2 (1.0 to 3.4)	< 0.001	< 0.001	2.0 (1.1 to 2.9)	< 0.001	< 0.001
mean_APexc_COV	-0.01 (-0.03 to 0.01)	0.41	0.48	0.01 (-0.03 to 0.04)	0.63	0.86	0.00 (-0.02 to 0.03)	0.91	0.91
group_char		0.11	0.22		0.65	0.86		0.29	0.41
H1000's	_			_			_		
H2000's	-0.39 (-1.1 to 0.36)			-0.87 (-2.7 to 1.0)			0.69 (-0.73 to 2.1)		
H3000's	-0.68 (-1.3 to -0.04)			-0.49 (-2.1 to 1.1)			1.0 (-0.26 to 2.3)		
mean_APexc_COV * group_char		0.48	0.48		0.93	0.93		0.30	0.41
mean_APexc_COV * H2000's	0.00 (-0.03 to 0.03)			0.00 (-0.05 to 0.05)			-0.01 (-0.04 to 0.03)		
mean_APexc_COV * H3000's	0.01 (-0.01 to 0.03)			0.01 (-0.04 to 0.05)			0.01 (-0.01 to 0.04)		
subj_char.sd(Intercept)	0.75 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
Residual.sdObservation	0.29 (NA to NA)			0.51 (NA to NA)			0.35 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_APexc_mean	for Cluster:	5						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.1 (0.67 to 1.5)	< 0.001	< 0.001	2.0 (0.95 to 3.1)	< 0.001	0.001	1.8 (0.98 to 2.7)	< 0.001	< 0.001
mean_APexc_mean	-4.6 (-8.7 to -0.41)	0.031	0.042	5.6 (-1.6 to 13)	0.13	0.26	3.7 (-1.3 to 8.6)	0.14	0.19
group_char		0.022	0.042		0.51	0.57		0.066	0.13
H1000's	_			_			_		
H2000's	-0.59 (-1.2 to 0.03)			-0.99 (-2.7 to 0.69)			0.34 (-0.97 to 1.7)		
H3000's	-0.76 (-1.3 to -0.20)			-0.42 (-2.0 to 1.1)			1.4 (0.18 to 2.6)		
mean_APexc_mean * group_char		0.31	0.31		0.57	0.57		0.52	0.52
mean_APexc_mean * H2000's	1.2 (-5.9 to 8.2)			4.3 (-7.9 to 16)			4.7 (-3.6 to 13)		
mean_APexc_mean * H3000's	5.0 (-1.5 to 11)			5.8 (-5.5 to 17)			0.58 (-7.1 to 8.3)		
subj_char.sd(Intercept)	0.76 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
Residual.sdObservation	0.29 (NA to NA)			0.50 (NA to NA)			0.34 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	5						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.79 (0.37 to 1.2)	< 0.001	< 0.001	2.7 (1.6 to 3.9)	< 0.001	< 0.001	2.1 (1.2 to 3.0)	< 0.001	< 0.001
mean_MLexc_COV	0.00 (-0.01 to 0.02)	0.78	0.87	-0.03 (-0.06 to 0.00)	0.090	0.18	0.00 (-0.03 to 0.02)	0.66	0.66
group_char		0.10	0.19		0.35	0.38		0.044	0.087
H1000's	_			_			_		
H2000's	-0.58 (-1.2 to 0.03)			-1.2 (-2.9 to 0.45)			0.65 (-0.67 to 2.0)		
H3000's	-0.55 (-1.1 to 0.02)			-0.65 (-2.2 to 0.90)			1.5 (0.33 to 2.7)		
mean_MLexc_COV * group_char		0.87	0.87		0.38	0.38		0.62	0.66
mean_MLexc_COV * H2000's	0.01 (-0.02 to 0.03)			0.03 (-0.02 to 0.07)			-0.01 (-0.04 to 0.02)		
mean_MLexc_COV * H3000's	0.00 (-0.02 to 0.03)			0.03 (-0.02 to 0.07)			-0.01 (-0.04 to 0.01)		
subj_char.sd(Intercept)	0.75 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
Residual.sdObservation	0.29 (NA to NA)			0.51 (NA to NA)			0.35 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean MLexc mean	for Cluster:	5						
·	EEG	Theta	I.	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.0 (0.62 to 1.4)	< 0.001	< 0.001	1.9 (0.82 to 3.0)	< 0.001	0.002	1.8 (0.98 to 2.7)	< 0.001	< 0.001
mean_MLexc_mean	-2.5 (-5.2 to 0.32)	0.083	0.13	5.7 (0.84 to 11)	0.022	0.043	2.7 (-0.59 to 6.0)	0.11	0.16
group_char		0.10	0.13		0.82	0.82		0.12	0.16
H1000's	_			_			_		
H2000's	-0.50 (-1.1 to 0.09)			-0.53 (-2.2 to 1.1)			0.51 (-0.79 to 1.8)		
H3000's	-0.56 (-1.1 to -0.01)			-0.17 (-1.7 to 1.3)			1.2 (0.06 to 2.4)		
mean_MLexc_mean * group_char		0.87	0.87		0.37	0.49		0.78	0.78
mean_MLexc_mean * H2000's	0.45 (-3.1 to 4.0)			-4.3 (-11 to 2.0)			-0.17 (-4.4 to 4.0)		
mean_MLexc_mean * H3000's	0.92 (-2.6 to 4.4)			-1.5 (-7.6 to 4.7)			1.1 (-3.1 to 5.2)		
subj_char.sd(Intercept)	0.76 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
Residual.sdObservation	0.29 (NA to NA)			0.50 (NA to NA)			0.34 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean StepDur	for Cluster:	5							
	EEG	Theta		EEG	EEG Alpha			EEG Beta		
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	
(Intercept)	1.0 (0.65 to 1.4)	< 0.001	< 0.001	2.1 (1.0 to 3.1)	< 0.001	< 0.001	1.9 (1.1 to 2.8)	< 0.001	< 0.001	
mean_StepDur	-0.22 (-0.40 to -0.03)	0.023	0.046	0.30 (-0.03 to 0.63)	0.077	0.15	0.11 (-0.12 to 0.33)	0.35	0.35	
group_char		0.16	0.21		0.62	0.74		0.24	0.32	
H1000's	_			_			_			
H2000's	-0.42 (-1.0 to 0.19)			-0.84 (-2.5 to 0.85)			0.31 (-1.0 to 1.6)			
H3000's	-0.51 (-1.1 to 0.05)			-0.40 (-2.0 to 1.1)			1.0 (-0.19 to 2.2)			
mean_StepDur * group_char		0.79	0.79		0.74	0.74		0.091	0.18	
mean_StepDur * H2000's	-0.15 (-0.56 to 0.27)			0.07 (-0.67 to 0.80)			0.32 (-0.18 to 0.81)			
mean_StepDur * H3000's	-0.05 (-0.46 to 0.37)			0.29 (-0.44 to 1.0)			0.51 (0.01 to 1.0)			
subj_char.sd(Intercept)	0.75 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)			
Residual.sdObservation	0.29 (NA to NA)			0.51 (NA to NA)			0.34 (NA to NA)			

CI = Confidence Interval
 False discovery rate correction for multiple testing

mean_UDexc_COV	for Cluster:	5						
EEG	Theta		EEG .	Alpha		EEG Beta		
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
0.99 (0.62 to 1.4)	< 0.001	< 0.001	2.2 (1.1 to 3.2)	< 0.001	< 0.001	1.9 (1.1 to 2.7)	< 0.001	< 0.001
-0.01 (-0.03 to 0.00)	0.037	0.074	0.01 (-0.01 to 0.04)	0.25	0.51	0.01 (0.00 to 0.03)	0.16	0.22
	0.080	0.11		0.67	0.87		0.15	0.22
_			_			_		
-0.55 (-1.1 to 0.01)			-0.75 (-2.4 to 0.89)			0.53 (-0.75 to 1.8)		
-0.51 (-1.0 to 0.01)			-0.28 (-1.8 to 1.2)			1.2 (0.00 to 2.3)		
	0.84	0.84		0.87	0.87		0.47	0.47
0.01 (-0.01 to 0.02)			-0.01 (-0.04 to 0.02)			0.00 (-0.02 to 0.02)		
0.00 (-0.02 to 0.02)			0.00 (-0.03 to 0.03)			0.01 (-0.01 to 0.03)		
0.76 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
0.29 (NA to NA)			0.51 (NA to NA)			0.34 (NA to NA)		
	Beta (95% CI) 0.99 (0.62 to 1.4) -0.01 (-0.03 to 0.00)  -0.55 (-1.1 to 0.01) -0.51 (-1.0 to 0.01)  0.01 (-0.01 to 0.02) 0.00 (-0.02 to 0.02) 0.76 (NA to NA)	EEG Theta   Beta (95% CI)   p-value   0.99 (0.62 to 1.4)   < 0.001   -0.01 (-0.03 to 0.00)   0.037   0.080   -0.55 (-1.1 to 0.01)   -0.51 (-1.0 to 0.01)   0.84   0.01 (-0.01 to 0.02)   0.00 (-0.02 to 0.02)   0.76 (NA to NA)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				

 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean UDexc mean	for Cluster:	5						
	EEG	Theta	1	EEG	Alpha		EEG Beta		
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.58 (0.20 to 0.96)	0.003	0.012	2.5 (1.4 to 3.6)	< 0.001	< 0.001	2.2 (1.3 to 3.0)	< 0.001	< 0.001
mean_UDexc_mean	10 (1.9 to 18)	0.016	0.032	-7.4 (-22 to 7.5)	0.33	0.65	-5.1 (-15 to 4.6)	0.31	0.31
group_char		0.19	0.25		0.48	0.65		0.019	0.038
H1000's	_			_			_		
H2000's	-0.47 (-1.1 to 0.11)			-1.0 (-2.7 to 0.67)			0.56 (-0.73 to 1.9)		
H3000's	-0.42 (-0.95 to 0.11)			-0.23 (-1.7 to 1.3)			1.7 (0.49 to 2.9)		
mean_UDexc_mean * group_char		0.84	0.84		0.70	0.70		0.051	0.069
mean_UDexc_mean * H2000's	-1.4 (-13 to 10)			6.7 (-14 to 28)			-0.63 (-14 to 13)		
mean_UDexc_mean * H3000's	-3.2 (-14 to 7.7)			-1.4 (-21 to 18)			-14 (-26 to -0.85)		
subj_char.sd(Intercept)	0.75 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
Residual.sdObservation	0.28 (NA to NA)			0.51 (NA to NA)			0.33 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	5						
	EEG	Theta		EEG	Alpha		EEG Beta		
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.99 (0.63 to 1.3)	< 0.001	< 0.001	2.1 (1.1 to 3.2)	< 0.001	< 0.001	2.0 (1.1 to 2.8)	< 0.001	< 0.001
mean_StanceDur	-0.13 (-0.24 to -0.02)	0.024	0.048	0.19 (-0.01 to 0.38)	0.066	0.13	0.06 (-0.07 to 0.19)	0.36	0.36
group_char		0.12	0.16		0.61	0.73		0.20	0.27
H1000's	_			_			_		
H2000's	-0.45 (-1.0 to 0.13)			-0.84 (-2.5 to 0.81)			0.36 (-0.93 to 1.6)		
H3000's	-0.51 (-1.0 to 0.02)			-0.37 (-1.9 to 1.1)			1.1 (-0.11 to 2.2)		
mean_StanceDur * group_char		0.82	0.82		0.73	0.73		0.070	0.14
mean_StanceDur * H2000's	-0.08 (-0.32 to 0.17)			0.05 (-0.39 to 0.48)			0.19 (-0.11 to 0.48)		
mean_StanceDur * H3000's	-0.03 (-0.27 to 0.22)			0.17 (-0.26 to 0.60)			0.32 (0.03 to 0.61)		
subj_char.sd(Intercept)	0.75 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
Residual.sdObservation	0.29 (NA to NA)			0.51 (NA to NA)			0.34 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

mean_GaitCycleDur	for Cluster:	5						
EEG	Theta		EEG	Alpha		EEG Beta		
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
1.0 (0.65 to 1.4)	< 0.001	< 0.001	2.1 (1.0 to 3.1)	< 0.001	< 0.001	1.9 (1.1 to 2.8)	< 0.001	< 0.001
-0.11 (-0.20 to -0.01)	0.023	0.047	0.15 (-0.02 to 0.31)	0.075	0.15	0.05 (-0.06 to 0.16)	0.35	0.35
	0.16	0.21		0.62	0.74		0.24	0.32
_			_			_		
-0.42 (-1.0 to 0.18)			-0.84 (-2.5 to 0.85)			0.31 (-1.0 to 1.6)		
-0.51 (-1.1 to 0.05)			-0.40 (-1.9 to 1.1)			1.0 (-0.19 to 2.2)		
	0.80	0.80		0.74	0.74		0.092	0.18
-0.07 (-0.28 to 0.14)			0.03 (-0.33 to 0.40)			0.16 (-0.09 to 0.40)		
-0.02 (-0.23 to 0.18)			0.15 (-0.22 to 0.51)			0.25 (0.01 to 0.50)		
0.75 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
0.29 (NA to NA)			0.51 (NA to NA)			0.34 (NA to NA)		
	Beta (95% CI) 1.0 (0.65 to 1.4) -0.11 (-0.20 to -0.01) -0.42 (-1.0 to 0.18) -0.51 (-1.1 to 0.05) -0.07 (-0.28 to 0.14) -0.02 (-0.23 to 0.18) 0.75 (NA to NA)	EEG Theta   Beta (95% CI)   p-value   1.0 (0.65 to 1.4)   <0.001   -0.11 (-0.20 to -0.01)   0.023   0.16	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ c c c c c c c } \hline \textbf{EEG Theta} & \textbf{EEG Alpha} \\ \hline \textbf{Beta (95\% CI)} & \textbf{p-value} & \textbf{q-value} & \textbf{Beta (95\% CI)} & \textbf{p-value} \\ \hline 1.0 (0.65 to 1.4) & <0.001 & <0.001 & 2.1 (1.0 to 3.1) & <0.001 \\ \hline -0.11 (-0.20 to -0.01) & 0.023 & 0.047 & 0.15 (-0.02 to 0.31) & 0.075 \\ \hline 0.16 & 0.21 & & & & & & \\ \hline -0.42 (-1.0 to 0.18) & & & & & & & \\ \hline -0.51 (-1.1 to 0.05) & & & & & & & \\ \hline -0.07 (-0.28 to 0.14) & & & & & & & \\ \hline -0.02 (-0.23 to 0.18) & & & & & & & \\ \hline 0.75 (NA to NA) & & & & & & & \\ \hline \end{array} $	$ \begin{array}{ c c c c c c c } \hline \textbf{EEG Theta} & \textbf{EEG Alpha} \\ \hline \textbf{Beta (95\% CI)} & \textbf{p-value} & \textbf{q-value} \\ \hline \textbf{Beta (95\% CI)} & \textbf{p-value} & \textbf{q-value} \\ \hline \textbf{1.0 (0.65 to 1.4)} & <0.001 & <0.001 & 2.1 (1.0 to 3.1) & <0.001 & <0.001 \\ \hline -0.11 (-0.20 to -0.01) & 0.023 & 0.047 & 0.15 (-0.02 to 0.31) & 0.075 & 0.15 \\ \hline & 0.16 & 0.21 & & & & & & & \\ \hline -0.42 (-1.0 to 0.18) & & & & & & & & \\ \hline -0.42 (-1.0 to 0.05) & & & & & & & & \\ \hline -0.51 (-1.1 to 0.05) & & & & & & & & \\ \hline -0.07 (-0.28 to 0.14) & & & & & & & & \\ \hline -0.02 (-0.23 to 0.18) & & & & & & & & \\ \hline 0.75 (NA to NA) & & & & & & & \\ \hline \end{array} $	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	5						
	EEG The	eta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.66 (0.31 to 1.0)	< 0.001	0.001	2.5 (1.4 to 3.5)	< 0.001	< 0.001	2.1 (1.3 to 2.9)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.68 (0.10 to 1.3)	0.022	0.045	-0.63 (-1.7 to 0.41)	0.23	0.47	-0.39 (-1.1 to 0.29)	0.26	0.26
group_char		0.094	0.13		0.50	0.58		0.023	0.045
H1000's	_			_			_		
H2000's	-0.52 (-1.1 to 0.03)			-0.94 (-2.6 to 0.68)			0.58 (-0.69 to 1.9)		
H3000's	-0.48 (-0.98 to 0.03)			-0.17 (-1.7 to 1.3)			1.6 (0.45 to 2.8)		
mean_PeakUpDownVel_mean * group_char		0.94	0.94		0.58	0.58		0.069	0.092
mean_PeakUpDownVel_mean * H2000's	0.03 (-0.82 to 0.87)			0.47 (-1.1 to 2.0)			-0.13 (-1.1 to 0.86)		
mean_PeakUpDownVel_mean * H3000's	-0.11 (-0.91 to 0.69)			-0.32 (-1.8 to 1.1)			-1.0 (-2.0 to -0.08)		
subj_char.sd(Intercept)	0.75 (NA to NA)			2.4 (NA to NA)			1.9 (NA to NA)		
Residual.sdObservation	0.28 (NA to NA)			0.51 (NA to NA)			0.33 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	6							
	EEG	EEG Theta			EEG Alpha			EEG Beta		
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	
(Intercept)	0.30 (-0.19 to 0.79)	0.23	0.46	4.3 (3.4 to 5.3)	< 0.001	< 0.001	2.7 (2.2 to 3.3)	< 0.001	< 0.001	
mean_APexc_COV	0.01 (-0.02 to 0.03)	0.66	0.66	0.01 (-0.03 to 0.04)	0.75	0.75	-0.01 (-0.03 to 0.01)	0.22	0.29	
group_char		0.061	0.24		0.088	0.18		0.004	0.009	
H1000's	_			_			_			
H2000's	0.33 (-0.46 to 1.1)			-1.2 (-2.7 to 0.37)			-0.86 (-1.7 to -0.04)			
H3000's	0.83 (0.14 to 1.5)			-1.5 (-2.9 to -0.11)			-1.2 (-1.9 to -0.48)			
mean_APexc_COV * group_char		0.54	0.66		0.65	0.75		0.40	0.40	
mean_APexc_COV * H2000's	0.01 (-0.02 to 0.04)			0.00 (-0.06 to 0.05)			0.01 (-0.02 to 0.04)			
mean_APexc_COV * H3000's	0.01 (-0.01 to 0.04)			0.02 (-0.03 to 0.06)			0.02 (-0.01 to 0.04)			
subj_char.sd(Intercept)	0.85 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)			
Residual.sdObservation	0.39 (NA to NA)			0.66 (NA to NA)			0.34 (NA to NA)			
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_APexc_mean	for Cluster:	6								
	EEG	EEG Theta			EEG Alpha			EEG Beta			
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value		
(Intercept)	0.37 (-0.08 to 0.81)	0.11	0.21	4.0 (3.1 to 4.9)	< 0.001	< 0.001	2.5 (2.0 to 3.0)	< 0.001	< 0.001		
mean_APexc_mean	0.28 (-4.8 to 5.4)	0.91	0.91	7.7 (-0.82 to 16)	0.076	0.15	0.80 (-3.6 to 5.2)	0.72	0.72		
group_char		0.006	0.022		0.15	0.20		0.008	0.015		
H1000's	_			_			_				
H2000's	0.71 (0.05 to 1.4)			-1.2 (-2.5 to 0.14)			-0.95 (-1.7 to -0.23)				
H3000's	0.98 (0.37 to 1.6)			-1.0 (-2.3 to 0.24)			-0.94 (-1.6 to -0.28)				
mean_APexc_mean * group_char		0.17	0.23		0.95	0.95		0.21	0.28		
mean_APexc_mean * H2000's	-0.97 (-9.6 to 7.7)			2.0 (-13 to 16)			6.6 (-0.88 to 14)				
mean_APexc_mean * H3000's	6.7 (-1.3 to 15)			1.9 (-12 to 15)			0.96 (-6.0 to 7.9)				
subj_char.sd(Intercept)	0.87 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)				
Residual.sdObservation	0.39 (NA to NA)			0.65 (NA to NA)			0.33 (NA to NA)				

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval

 $<sup>^{2}</sup>$  False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	6						
	EEG	Theta		EEG .	Alpha		EEG Beta		
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.29 (-0.20 to 0.77)	0.24	0.48	4.5 (3.5 to 5.5)	< 0.001	< 0.001	2.6 (2.1 to 3.1)	< 0.001	< 0.001
mean_MLexc_COV	0.01 (-0.02 to 0.03)	0.61	0.73	0.00 (-0.05 to 0.04)	0.82	0.82	-0.01 (-0.03 to 0.01)	0.53	0.60
group_char		< 0.001	< 0.001		0.37	0.74		0.050	0.10
H1000's	_			_			_		
H2000's	0.69 (0.02 to 1.4)			-0.88 (-2.3 to 0.49)			-0.48 (-1.2 to 0.25)		
H3000's	1.4 (0.76 to 2.0)			-0.80 (-2.1 to 0.51)			-0.86 (-1.6 to -0.17)		
mean_MLexc_COV * group_char		0.73	0.73		0.71	0.82		0.60	0.60
mean_MLexc_COV * H2000's	0.00 (-0.03 to 0.03)			-0.02 (-0.07 to 0.03)			-0.01 (-0.04 to 0.01)		
mean_MLexc_COV * H3000's	-0.01 (-0.04 to 0.02)			-0.02 (-0.07 to 0.03)			0.00 (-0.03 to 0.02)		
subj_char.sd(Intercept)	0.85 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.39 (NA to NA)			0.65 (NA to NA)			0.33 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_mean	for Cluster:	6						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.41 (-0.01 to 0.83)	0.058	0.078	4.0 (3.1 to 4.9)	< 0.001	< 0.001	2.4 (2.0 to 2.9)	< 0.001	< 0.001
mean_MLexc_mean	-0.36 (-3.6 to 2.9)	0.83	0.83	5.1 (-0.34 to 11)	0.066	0.13	1.3 (-1.6 to 4.1)	0.38	0.51
group_char		0.020	0.039		0.11	0.15		0.013	0.026
H1000's	_			_			_		
H2000's	0.64 (0.03 to 1.2)			-1.2 (-2.4 to 0.12)			-0.81 (-1.5 to -0.12)		
H3000's	0.79 (0.21 to 1.4)			-1.2 (-2.4 to 0.06)			-0.91 (-1.6 to -0.26)		
mean_MLexc_mean * group_char		0.006	0.023		0.75	0.75		0.58	0.58
mean_MLexc_mean * H2000's	0.33 (-3.7 to 4.4)			-1.1 (-7.8 to 5.7)			1.4 (-2.1 to 4.9)		
mean_MLexc_mean * H3000's	5.5 (1.3 to 9.6)			1.2 (-5.8 to 8.2)			-0.07 (-3.7 to 3.6)		
subj_char.sd(Intercept)	0.85 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.38 (NA to NA)			0.64 (NA to NA)			0.33 (NA to NA)		
Residual.sdObservation	0.38 (NA to NA)			0.64 (NA to NA)			0.33 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean StepDur	for Cluster:	6						
<u>-</u>	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.41 (0.01 to 0.81)	0.045	0.060	4.0 (3.1 to 4.8)	< 0.001	< 0.001	2.4 (2.0 to 2.9)	< 0.001	< 0.001
mean_StepDur	-0.03 (-0.27 to 0.20)	0.78	0.78	0.50 (0.12 to 0.88)	0.010	0.020	0.14 (-0.06 to 0.34)	0.17	0.23
group_char		0.019	0.038		0.035	0.046		0.007	0.015
H1000's	_			_			_		
H2000's	0.74 (0.10 to 1.4)			-1.2 (-2.5 to 0.09)			-0.91 (-1.6 to -0.21)		
H3000's	0.76 (0.16 to 1.4)			-1.6 (-2.8 to -0.31)			-0.94 (-1.6 to -0.27)		
mean_StepDur * group_char		0.017	0.038		0.10	0.10		0.25	0.25
mean_StepDur * H2000's	-0.10 (-0.58 to 0.37)			0.14 (-0.64 to 0.91)			0.35 (-0.06 to 0.76)		
mean_StepDur * H3000's	0.69 (0.18 to 1.2)			0.91 (0.08 to 1.7)			0.08 (-0.36 to 0.52)		
subj_char.sd(Intercept)	0.87 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.38 (NA to NA)			0.63 (NA to NA)			0.33 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval

 $<sup>^{2}</sup>$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	6						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.41 (0.02 to 0.79)	0.039	0.052	4.3 (3.4 to 5.1)	< 0.001	< 0.001	2.5 (2.1 to 3.0)	< 0.001	< 0.001
mean_UDexc_COV	0.00 (-0.02 to 0.01)	0.79	0.79	0.01 (-0.01 to 0.04)	0.23	0.31	0.00 (-0.01 to 0.01)	0.99	0.99
group_char		0.007	0.028		0.043	0.085		0.006	0.011
H1000's	_			_			_		
H2000's	0.66 (0.08 to 1.2)			-1.3 (-2.5 to -0.04)			-0.83 (-1.5 to -0.17)		
H3000's	0.85 (0.29 to 1.4)			-1.4 (-2.6 to -0.18)			-0.97 (-1.6 to -0.33)		
mean_UDexc_COV * group_char		0.018	0.036		0.50	0.50		0.43	0.58
mean_UDexc_COV * H2000's	0.00 (-0.02 to 0.02)			0.00 (-0.03 to 0.04)			0.01 (-0.01 to 0.03)		
mean_UDexc_COV * H3000's	0.03 (0.01 to 0.05)			0.02 (-0.02 to 0.06)			0.00 (-0.02 to 0.02)		
subj_char.sd(Intercept)	0.86 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.38 (NA to NA)			0.65 (NA to NA)			0.34 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	6						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.30 (-0.10 to 0.71)	0.14	0.28	4.7 (3.9 to 5.6)	< 0.001	< 0.001	2.6 (2.2 to 3.1)	< 0.001	< 0.001
mean_UDexc_mean	3.3 (-6.0 to 12)	0.49	0.49	-12 (-27 to 3.4)	0.13	0.21	-4.5 (-12 to 3.2)	0.25	0.34
group_char		< 0.001	< 0.001		0.16	0.21		0.041	0.081
H1000's	_			_			_		
H2000's	0.68 (0.08 to 1.3)			-1.1 (-2.4 to 0.13)			-0.49 (-1.2 to 0.18)		
H3000's	1.5 (0.93 to 2.1)			-0.92 (-2.1 to 0.28)			-0.81 (-1.4 to -0.18)		
mean_UDexc_mean * group_char		0.21	0.28		0.88	0.88		0.42	0.42
mean_UDexc_mean * H2000's	-0.57 (-14 to 13)			-2.1 (-24 to 20)			-7.4 (-18 to 3.7)		
mean_UDexc_mean * H3000's	-10 (-23 to 2.6)			-5.4 (-27 to 16)			-4.3 (-15 to 6.4)		
subj_char.sd(Intercept)	0.86 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.39 (NA to NA)			0.64 (NA to NA)			0.33 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean StanceDur	for Cluster:	6						
· · · · · · · · · · · · · · · · · · ·	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.40 (0.02 to 0.79)	0.038	0.051	4.1 (3.2 to 4.9)	< 0.001	< 0.001	2.4 (2.0 to 2.9)	< 0.001	< 0.001
mean_StanceDur	-0.02 (-0.16 to 0.12)	0.79	0.79	0.31 (0.09 to 0.54)	0.007	0.014	0.09 (-0.03 to 0.21)	0.14	0.18
group_char		0.007	0.020		0.043	0.057		0.009	0.018
H1000's	_			_			_		
H2000's	0.71 (0.12 to 1.3)			-1.2 (-2.4 to 0.07)			-0.83 (-1.5 to -0.15)		
H3000's	0.84 (0.27 to 1.4)			-1.4 (-2.6 to -0.24)			-0.90 (-1.5 to -0.27)		
mean_StanceDur * group_char		0.010	0.020		0.12	0.12		0.35	0.35
mean_StanceDur * H2000's	-0.05 (-0.33 to 0.23)			0.06 (-0.40 to 0.51)			0.18 (-0.06 to 0.42)		
mean_StanceDur * H3000's	0.43 (0.14 to 0.73)			0.51 (0.02 to 1.0)			0.01 (-0.24 to 0.27)		
subj_char.sd(Intercept)	0.86 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.38 (NA to NA)			0.63 (NA to NA)			0.33 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	6						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.41 (0.01 to 0.81)	0.045	0.060	4.0 (3.1 to 4.8)	< 0.001	< 0.001	2.4 (2.0 to 2.9)	< 0.001	< 0.001
mean_GaitCycleDur	-0.02 (-0.13 to 0.10)	0.78	0.78	0.25 (0.06 to 0.44)	0.010	0.020	0.07 (-0.03 to 0.17)	0.17	0.23
group_char		0.019	0.038		0.034	0.046		0.007	0.014
H1000's	_			_			_		
H2000's	0.73 (0.10 to 1.4)			-1.2 (-2.5 to 0.09)			-0.91 (-1.6 to -0.21)		
H3000's	0.76 (0.16 to 1.4)			-1.6 (-2.8 to -0.32)			-0.94 (-1.6 to -0.28)		
mean_GaitCycleDur * group_char		0.017	0.038		0.10	0.10		0.25	0.25
mean_GaitCycleDur * H2000's	-0.05 (-0.29 to 0.19)			0.07 (-0.32 to 0.46)			0.17 (-0.03 to 0.38)		
mean_GaitCycleDur * H3000's	0.35 (0.09 to 0.60)			0.46 (0.04 to 0.87)			0.04 (-0.18 to 0.26)		
subj_char.sd(Intercept)	0.87 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.38 (NA to NA)			0.63 (NA to NA)			0.33 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	6						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.33 (-0.05 to 0.71)	0.087	0.12	4.7 (3.8 to 5.5)	< 0.001	< 0.001	2.6 (2.2 to 3.0)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.22 (-0.48 to 0.92)	0.54	0.54	-0.87 (-2.0 to 0.29)	0.14	0.23	-0.22 (-0.81 to 0.37)	0.46	0.46
group_char		< 0.001	< 0.001		0.17	0.23		0.035	0.070
H1000's	_			_			_		
H2000's	0.69 (0.12 to 1.2)			-1.1 (-2.3 to 0.14)			-0.48 (-1.1 to 0.18)		
H3000's	1.5 (0.99 to 2.1)			-0.84 (-2.0 to 0.31)			-0.81 (-1.4 to -0.19)		
mean_PeakUpDownVel_mean * group_char		0.048	0.10		0.66	0.66		0.24	0.32
mean_PeakUpDownVel_mean * H2000's	-0.11 (-1.1 to 0.87)			-0.36 (-2.0 to 1.3)			-0.72 (-1.5 to 0.11)		
mean_PeakUpDownVel_mean * H3000's	-1.1 (-2.0 to -0.12)			-0.73 (-2.3 to 0.85)			-0.41 (-1.2 to 0.40)		
subj_char.sd(Intercept)	0.86 (NA to NA)			2.0 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.39 (NA to NA)			0.64 (NA to NA)			0.33 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	7						
	EEG	Theta	,	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.27 (-0.06 to 0.60)	0.11	0.44	2.9 (1.6 to 4.2)	< 0.001	< 0.001	2.7 (2.0 to 3.4)	< 0.001	< 0.001
mean_APexc_COV	0.01 (-0.01 to 0.02)	0.27	0.54	0.01 (-0.03 to 0.06)	0.58	0.81	0.00 (-0.02 to 0.03)	0.70	0.70
group_char		0.43	0.58		0.60	0.81		0.32	0.52
H1000's	_			_			_		
H2000's	-0.34 (-0.91 to 0.24)			-0.93 (-3.1 to 1.3)			0.80 (-0.45 to 2.0)		
H3000's	-0.24 (-0.72 to 0.23)			-0.82 (-2.7 to 1.0)			0.68 (-0.37 to 1.7)		
mean_APexc_COV * group_char		0.80	0.80		0.83	0.83		0.39	0.52
mean_APexc_COV * H2000's	-0.01 (-0.03 to 0.01)			0.00 (-0.07 to 0.07)			0.00 (-0.04 to 0.04)		
mean_APexc_COV * H3000's	0.00 (-0.02 to 0.01)			0.01 (-0.04 to 0.07)			0.02 (-0.01 to 0.05)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
Residual.sdObservation	0.22 (NA to NA)			0.74 (NA to NA)			0.41 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

mean APexc mean	for Cluster:	7						
EEG	Theta		EEG	Alpha		EEG	Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
0.37 (0.07 to 0.67)	0.015	0.062	2.8 (1.5 to 4.0)	< 0.001	< 0.001	2.3 (1.6 to 3.0)	< 0.001	< 0.001
0.35 (-2.7 to 3.4)	0.82	0.82	6.9 (-3.2 to 17)	0.18	0.36	8.5 (3.0 to 14)	0.002	0.005
	0.69	0.82		0.62	0.74		0.047	0.063
_			_			_		
-0.16 (-0.64 to 0.33)			-0.95 (-2.9 to 1.0)			0.87 (-0.25 to 2.0)		
-0.18 (-0.60 to 0.25)			-0.53 (-2.3 to 1.2)			1.2 (0.23 to 2.2)		
	0.079	0.16		0.74	0.74		0.91	0.91
-6.0 (-11 to -0.73)			2.7 (-15 to 20)			1.5 (-7.9 to 11)		
-1.4 (-6.1 to 3.4)			6.3 (-9.6 to 22)			1.8 (-6.7 to 10)		
0.63 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
0.22 (NA to NA)			0.73 (NA to NA)			0.39 (NA to NA)		
	Beta (95% CI) 0.37 (0.07 to 0.67) 0.35 (-2.7 to 3.4)  -0.16 (-0.64 to 0.33) -0.18 (-0.60 to 0.25)  -6.0 (-11 to -0.73) -1.4 (-6.1 to 3.4) 0.63 (NA to NA)	Beta (95% CI)         p-value           0.37 (0.07 to 0.67)         0.015           0.35 (-2.7 to 3.4)         0.82           0.69         0.69           -0.16 (-0.64 to 0.33)         -0.18 (-0.60 to 0.25)           -0.0 (-11 to -0.73)         -1.4 (-6.1 to 3.4)           0.63 (NA to NA)         -0.63 (NA to NA)	Beta (95% CI)         p-value         q-value           0.37 (0.07 to 0.67)         0.015         0.062           0.35 (-2.7 to 3.4)         0.82         0.82           -         0.69         0.82           -         -         -           -0.16 (-0.64 to 0.33)         -         -           -0.18 (-0.60 to 0.25)         0.079         0.16           -6.0 (-11 to -0.73)         -         -           -1.4 (-6.1 to 3.4)         0.63 (NA to NA)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	7						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.25 (-0.06 to 0.57)	0.11	0.20	3.0 (1.8 to 4.3)	< 0.001	< 0.001	2.9 (2.2 to 3.6)	< 0.001	< 0.001
mean_MLexc_COV	0.01 (0.00 to 0.02)	0.15	0.20	0.01 (-0.04 to 0.06)	0.76	0.86	-0.01 (-0.04 to 0.02)	0.46	0.46
group_char		0.12	0.20		0.86	0.86		0.037	0.049
H1000's	_			_			_		
H2000's	-0.50 (-1.0 to -0.01)			-0.11 (-2.1 to 1.9)			1.4 (0.25 to 2.5)		
H3000's	-0.30 (-0.74 to 0.14)			-0.48 (-2.3 to 1.3)			0.97 (-0.03 to 2.0)		
mean_MLexc_COV * group_char		0.91	0.91		0.11	0.23		0.013	0.026
mean_MLexc_COV * H2000's	0.00 (-0.02 to 0.02)			-0.05 (-0.12 to 0.01)			-0.03 (-0.07 to 0.00)		
mean_MLexc_COV * H3000's	0.00 (-0.01 to 0.02)			0.01 (-0.05 to 0.07)			0.01 (-0.02 to 0.05)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
Residual.sdObservation	0.22 (NA to NA)			0.74 (NA to NA)			0.41 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

mean_MLexc_mean	for Cluster:	7						
EEG	Theta		EEG	Alpha		EEG	Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
0.47 (0.17 to 0.76)	0.002	0.008	3.0 (1.8 to 4.2)	< 0.001	< 0.001	2.4 (1.8 to 3.1)	< 0.001	< 0.001
-0.89 (-2.7 to 0.90)	0.33	0.48	1.5 (-4.6 to 7.5)	0.64	0.64	4.2 (1.0 to 7.4)	0.010	0.019
	0.48	0.48		0.35	0.47		0.11	0.14
_			_			_		
-0.28 (-0.75 to 0.18)			-1.4 (-3.3 to 0.54)			0.72 (-0.36 to 1.8)		
-0.15 (-0.56 to 0.27)			-0.80 (-2.5 to 0.89)			1.0 (0.06 to 2.0)		
	0.38	0.48		0.35	0.47		0.64	0.64
-1.7 (-4.2 to 0.72)			5.3 (-3.1 to 14)			1.5 (-2.8 to 5.8)		
-1.1 (-3.5 to 1.3)			5.3 (-2.8 to 13)			2.0 (-2.2 to 6.2)		
0.64 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
0.22 (NA to NA)			0.73 (NA to NA)			0.38 (NA to NA)		
	EEG Beta (95% CI) 0.47 (0.17 to 0.76) -0.89 (-2.7 to 0.90) -0.28 (-0.75 to 0.18) -0.15 (-0.56 to 0.27) -1.7 (-4.2 to 0.72) -1.1 (-3.5 to 1.3) 0.64 (NA to NA)	0.47 (0.17 to 0.76) 0.002 -0.89 (-2.7 to 0.90) 0.33 0.48 	EEG Theta           Beta (95% CI)         p-value         q-value           0.47 (0.17 to 0.76)         0.002         0.008           -0.89 (-2.7 to 0.90)         0.33         0.48           0.48         0.48         0.48           -0.28 (-0.75 to 0.18)         -0.15 (-0.56 to 0.27)           -0.15 (-0.56 to 0.27)         0.38         0.48           -1.7 (-4.2 to 0.72)         -1.1 (-3.5 to 1.3)           0.64 (NA to NA)         0.64 (NA to NA)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	7						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.15 to 0.71)	0.003	0.011	2.8 (1.6 to 3.9)	< 0.001	< 0.001	2.4 (1.7 to 3.0)	< 0.001	< 0.001
mean_StepDur	-0.04 (-0.18 to 0.10)	0.56	0.72	0.39 (-0.07 to 0.85)	0.10	0.20	0.45 (0.20 to 0.69)	< 0.001	< 0.001
group_char		0.72	0.72		0.42	0.42		0.069	0.092
H1000's	_			_			_		
H2000's	-0.19 (-0.66 to 0.28)			-1.3 (-3.2 to 0.67)			0.68 (-0.42 to 1.8)		
H3000's	-0.09 (-0.52 to 0.33)			-0.68 (-2.4 to 1.1)			1.2 (0.17 to 2.1)		
mean_StepDur * group_char		0.056	0.11		0.36	0.42		0.46	0.46
mean_StepDur * H2000's	-0.33 (-0.62 to -0.04)			0.56 (-0.42 to 1.5)			0.32 (-0.20 to 0.83)		
mean_StepDur * H3000's	-0.22 (-0.52 to 0.08)			0.56 (-0.44 to 1.6)			0.17 (-0.37 to 0.70)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
Residual.sdObservation	0.22 (NA to NA)			0.73 (NA to NA)			0.39 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	7						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.15 to 0.70)	0.002	0.009	3.1 (1.9 to 4.2)	< 0.001	< 0.001	2.6 (1.9 to 3.2)	< 0.001	< 0.001
mean_UDexc_COV	0.00 (-0.01 to 0.01)	0.51	0.65	0.00 (-0.03 to 0.03)	0.82	0.82	0.02 (0.00 to 0.03)	0.022	0.045
group_char		0.28	0.57		0.37	0.50		0.17	0.22
H1000's	_			_			_		
H2000's	-0.35 (-0.80 to 0.09)			-1.3 (-3.1 to 0.60)			0.71 (-0.35 to 1.8)		
H3000's	-0.19 (-0.60 to 0.21)			-0.82 (-2.5 to 0.86)			0.87 (-0.09 to 1.8)		
mean_UDexc_COV * group_char		0.65	0.65		0.29	0.50		0.26	0.26
mean_UDexc_COV * H2000's	-0.01 (-0.02 to 0.01)			0.03 (-0.02 to 0.08)			0.01 (-0.01 to 0.04)		
mean_UDexc_COV * H3000's	0.00 (-0.02 to 0.01)			0.03 (-0.01 to 0.08)			0.02 (0.00 to 0.04)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.8 (NA to NA)			1.6 (NA to NA)		
Residual.sdObservation	0.22 (NA to NA)			0.73 (NA to NA)			0.38 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

mean UDexc mean	for Cluster:	7						
			EEG	Alpha		EEC	G Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
0.32 (0.04 to 0.61)	0.025	0.10	3.2 (2.0 to 4.3)	< 0.001	< 0.001	3.1 (2.4 to 3.7)	< 0.001	< 0.001
2.9 (-2.5 to 8.3)	0.29	0.39	-1.9 (-20 to 16)	0.83	0.95	-12 (-22 to -2.8)	0.011	0.023
	0.059	0.12		0.95	0.95		0.023	0.030
_			_			_		
-0.55 (-1.0 to -0.09)			-0.28 (-2.2 to 1.6)			1.1 (0.06 to 2.2)		
-0.29 (-0.69 to 0.12)			0.01 (-1.7 to 1.7)			1.2 (0.28 to 2.2)		
	0.58	0.58		0.20	0.39		0.33	0.33
4.6 (-4.1 to 13)			-25 (-54 to 3.6)			-11 (-27 to 3.8)		
2.2 (-5.4 to 9.8)			-16 (-42 to 9.0)			-2.8 (-16 to 11)		
0.63 (NA to NA)			2.8 (NA to NA)			1.6 (NA to NA)		
0.22 (NA to NA)			0.73 (NA to NA)			0.39 (NA to NA)		
	Beta (95% CI) 0.32 (0.04 to 0.61) 2.9 (-2.5 to 8.3)  -0.55 (-1.0 to -0.09) -0.29 (-0.69 to 0.12)  4.6 (-4.1 to 13) 2.2 (-5.4 to 9.8) 0.63 (NA to NA)	EEG Theta  Beta (95% CI) p-value  0.32 (0.04 to 0.61) 0.025  2.9 (-2.5 to 8.3) 0.29	EEG Theta           Beta (95% CI)         p-value         q-value           0.32 (0.04 to 0.61)         0.025         0.10           2.9 (-2.5 to 8.3)         0.29         0.39           0.059         0.12           -         -           -0.55 (-1.0 to -0.09)         -           -0.29 (-0.69 to 0.12)         0.58           4.6 (-4.1 to 13)         0.22 (-5.4 to 9.8)           0.63 (NA to NA)         0.63 (NA to NA)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	7						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.42 (0.15 to 0.69)	0.002	0.010	2.9 (1.7 to 4.0)	< 0.001	< 0.001	2.5 (1.8 to 3.1)	< 0.001	< 0.001
mean_StanceDur	-0.02 (-0.10 to 0.06)	0.60	0.60	0.23 (-0.04 to 0.50)	0.10	0.20	0.26 (0.12 to 0.41)	< 0.001	< 0.001
group_char		0.54	0.60		0.44	0.44		0.059	0.079
H1000's	_			_			_		
H2000's	-0.25 (-0.70 to 0.20)			-1.2 (-3.1 to 0.67)			0.72 (-0.35 to 1.8)		
H3000's	-0.12 (-0.52 to 0.29)			-0.66 (-2.3 to 1.0)			1.1 (0.19 to 2.1)		
mean_StanceDur * group_char		0.066	0.13		0.29	0.39		0.43	0.43
mean_StanceDur * H2000's	-0.18 (-0.36 to -0.01)			0.35 (-0.22 to 0.92)			0.19 (-0.12 to 0.49)		
mean_StanceDur * H3000's	-0.13 (-0.31 to 0.04)			0.37 (-0.21 to 0.95)			0.12 (-0.19 to 0.43)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
Residual.sdObservation	0.22 (NA to NA)			0.72 (NA to NA)			0.39 (NA to NA)		
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CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	7						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.15 to 0.71)	0.003	0.011	2.8 (1.6 to 3.9)	< 0.001	< 0.001	2.4 (1.7 to 3.0)	< 0.001	< 0.001
mean_GaitCycleDur	-0.02 (-0.09 to 0.05)	0.57	0.72	0.19 (-0.04 to 0.42)	0.10	0.20	0.22 (0.10 to 0.35)	< 0.001	< 0.001
group_char		0.72	0.72		0.43	0.43		0.068	0.091
H1000's	_			_			_		
H2000's	-0.19 (-0.66 to 0.28)			-1.3 (-3.2 to 0.68)			0.69 (-0.42 to 1.8)		
H3000's	-0.09 (-0.52 to 0.33)			-0.68 (-2.4 to 1.1)			1.2 (0.17 to 2.1)		
mean_GaitCycleDur * group_char		0.055	0.11		0.37	0.43		0.47	0.47
mean_GaitCycleDur * H2000's	-0.16 (-0.31 to -0.02)			0.27 (-0.21 to 0.76)			0.16 (-0.10 to 0.41)		
mean_GaitCycleDur * H3000's	-0.11 (-0.26 to 0.04)			0.28 (-0.22 to 0.78)			0.08 (-0.18 to 0.35)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
Residual.sdObservation	0.22 (NA to NA)			0.73 (NA to NA)			0.39 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	7						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.35 (0.08 to 0.62)	0.011	0.044	3.2 (2.1 to 4.3)	< 0.001	< 0.001	3.0 (2.4 to 3.6)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.19 (-0.21 to 0.59)	0.35	0.35	-0.21 (-1.6 to 1.1)	0.76	0.87	-0.93 (-1.6 to -0.22)	0.011	0.021
group_char		0.033	0.066		0.87	0.87		0.017	0.022
H1000's	_			_			_		
H2000's	-0.57 (-1.0 to -0.13)			-0.45 (-2.3 to 1.4)			1.1 (0.06 to 2.2)		
H3000's	-0.33 (-0.71 to 0.06)			0.00 (-1.6 to 1.6)			1.3 (0.34 to 2.2)		
mean_PeakUpDownVel_mean * group_char		0.28	0.35		0.19	0.38		0.31	0.31
mean_PeakUpDownVel_mean * H2000's	0.48 (-0.16 to 1.1)			-1.7 (-3.9 to 0.45)			-0.88 (-2.0 to 0.25)		
mean_PeakUpDownVel_mean * H3000's	0.35 (-0.21 to 0.92)			-1.5 (-3.4 to 0.41)			-0.33 (-1.3 to 0.67)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.7 (NA to NA)			1.6 (NA to NA)		
Residual.sdObservation	0.22 (NA to NA)			0.73 (NA to NA)			0.38 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	8						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.0 (0.53 to 1.6)	< 0.001	< 0.001	1.1 (0.31 to 1.9)	0.007	0.028	0.72 (0.15 to 1.3)	0.013	0.053
mean_APexc_COV	0.00 (-0.02 to 0.03)	0.76	0.76	0.01 (-0.02 to 0.05)	0.55	0.70	0.00 (-0.02 to 0.02)	0.88	0.88
group_char		0.65	0.76		0.70	0.70		0.054	0.11
H1000's	_			_			_		
H2000's	-0.38 (-1.2 to 0.42)			0.44 (-0.81 to 1.7)			0.90 (0.05 to 1.7)		
H3000's	-0.21 (-0.97 to 0.56)			0.45 (-0.75 to 1.6)			0.88 (0.04 to 1.7)		
mean_APexc_COV * group_char		0.65	0.76		0.10	0.20		0.12	0.16
mean_APexc_COV * H2000's	-0.01 (-0.04 to 0.02)			-0.04 (-0.09 to 0.01)			-0.02 (-0.04 to 0.01)		
mean_APexc_COV * H3000's	-0.01 (-0.04 to 0.01)			0.01 (-0.04 to 0.05)			0.00 (-0.02 to 0.02)		
subj_char.sd(Intercept)	0.83 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.32 (NA to NA)			0.51 (NA to NA)			0.24 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

mean APexc mean	for Cluster:	8						
EEG	Theta		EEG	Alpha		EEG	Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
1.5 (0.98 to 1.9)	< 0.001	< 0.001	1.0 (0.28 to 1.8)	0.007	0.027	0.59 (0.05 to 1.1)	0.031	0.062
-6.5 (-12 to -1.4)	0.012	0.024	4.9 (-3.3 to 13)	0.24	0.32	2.0 (-1.8 to 5.7)	0.30	0.30
	0.078	0.10		0.17	0.32		0.12	0.16
_			_			_		
-0.75 (-1.5 to -0.05)			-0.57 (-1.7 to 0.52)			0.13 (-0.65 to 0.91)		
-0.61 (-1.3 to 0.08)			0.49 (-0.57 to 1.6)			0.79 (0.00 to 1.6)		
	0.94	0.94		0.46	0.46		0.021	0.062
1.2 (-7.9 to 10)			7.1 (-7.8 to 22)			9.4 (2.6 to 16)		
1.2 (-6.8 to 9.2)			7.3 (-5.8 to 20)			4.5 (-1.5 to 10)		
0.85 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
0.31 (NA to NA)			0.51 (NA to NA)			0.23 (NA to NA)		
	Beta (95% CI) 1.5 (0.98 to 1.9) -6.5 (-12 to -1.4) -0.75 (-1.5 to -0.05) -0.61 (-1.3 to 0.08) 1.2 (-7.9 to 10) 1.2 (-6.8 to 9.2) 0.85 (NA to NA)	EEG Theta  Beta (95% CI) p-value  1.5 (0.98 to 1.9) < 0.001  -6.5 (-12 to -1.4) 0.012  0.078  -0.75 (-1.5 to -0.05)  -0.61 (-1.3 to 0.08)  1.2 (-7.9 to 10)  1.2 (-6.8 to 9.2)  0.85 (NA to NA)	EEG Theta           Beta (95% CI)         p-value         q-value           1.5 (0.98 to 1.9)         <0.001	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	8						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.72 (0.21 to 1.2)	0.006	0.024	1.4 (0.64 to 2.2)	< 0.001	0.001	0.62 (0.06 to 1.2)	0.031	0.054
mean_MLexc_COV	0.03 (0.00 to 0.05)	0.027	0.053	-0.01 (-0.05 to 0.03)	0.59	0.77	0.01 (-0.01 to 0.02)	0.56	0.56
group_char		0.42	0.56		0.77	0.77		0.041	0.054
H1000's	_			_			_		
H2000's	-0.44 (-1.1 to 0.25)			-0.28 (-1.3 to 0.77)			0.89 (0.10 to 1.7)		
H3000's	-0.38 (-1.1 to 0.36)			-0.40 (-1.5 to 0.73)			0.91 (0.09 to 1.7)		
mean_MLexc_COV * group_char		0.69	0.69		< 0.001	0.001		0.005	0.018
mean_MLexc_COV * H2000's	-0.01 (-0.04 to 0.02)			0.00 (-0.05 to 0.04)			-0.03 (-0.05 to -0.01)		
mean_MLexc_COV * H3000's	-0.01 (-0.04 to 0.02)			0.08 (0.03 to 0.13)			0.00 (-0.02 to 0.03)		
subj_char.sd(Intercept)	0.84 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.50 (NA to NA)			0.24 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean MLexc mean	for Cluster:	8						
<u>-</u>	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.5 (1.0 to 1.9)	< 0.001	< 0.001	1.1 (0.37 to 1.8)	0.003	0.011	0.63 (0.09 to 1.2)	0.021	0.086
mean_MLexc_mean	-4.5 (-7.5 to -1.6)	0.003	0.005	2.7 (-2.3 to 7.7)	0.29	0.38	0.92 (-1.3 to 3.2)	0.43	0.43
group_char		0.047	0.063		0.070	0.14		0.089	0.18
H1000's	_			_			_		
H2000's	-0.78 (-1.4 to -0.14)			-0.39 (-1.4 to 0.59)			0.28 (-0.48 to 1.0)		
H3000's	-0.57 (-1.2 to 0.09)			0.79 (-0.24 to 1.8)			0.87 (0.08 to 1.7)		
mean_MLexc_mean * group_char		0.48	0.48		0.93	0.93		0.19	0.26
mean_MLexc_mean * H2000's	2.3 (-1.4 to 5.9)			0.39 (-5.8 to 6.6)			2.5 (-0.33 to 5.2)		
mean_MLexc_mean * H3000's	1.5 (-2.5 to 5.4)			-0.74 (-7.5 to 6.0)			0.91 (-2.1 to 4.0)		
subj_char.sd(Intercept)	0.85 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.51 (NA to NA)			0.23 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	8						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.5 (1.0 to 1.9)	< 0.001	< 0.001	1.1 (0.39 to 1.7)	0.002	0.008	0.60 (0.08 to 1.1)	0.024	0.048
mean_StepDur	-0.38 (-0.59 to -0.17)	< 0.001	< 0.001	0.24 (-0.12 to 0.60)	0.18	0.35	0.11 (-0.05 to 0.27)	0.19	0.19
group_char		0.10	0.14		0.26	0.35		0.16	0.19
H1000's	_			_			_		
H2000's	-0.70 (-1.4 to -0.05)			-0.51 (-1.5 to 0.50)			0.15 (-0.62 to 0.91)		
H3000's	-0.36 (-1.1 to 0.35)			0.45 (-0.66 to 1.6)			0.76 (-0.04 to 1.6)		
mean_StepDur * group_char		0.55	0.55		0.47	0.47		0.005	0.019
mean_StepDur * H2000's	0.03 (-0.39 to 0.44)			0.30 (-0.40 to 1.0)			0.51 (0.19 to 0.82)		
mean_StepDur * H3000's	-0.30 (-0.87 to 0.26)			0.52 (-0.45 to 1.5)			0.32 (-0.12 to 0.76)		
subj_char.sd(Intercept)	0.85 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.51 (NA to NA)			0.23 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	8						
	EEG	Theta	,	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.4 (0.96 to 1.8)	< 0.001	< 0.001	1.2 (0.52 to 1.8)	< 0.001	0.002	0.65 (0.13 to 1.2)	0.015	0.060
mean_UDexc_COV	-0.02 (-0.04 to -0.01)	0.002	0.004	0.01 (-0.02 to 0.03)	0.50	0.66	0.00 (-0.01 to 0.02)	0.50	0.50
group_char		0.070	0.094		0.12	0.23		0.065	0.13
H1000's	_			_			_		
H2000's	-0.69 (-1.3 to -0.08)			-0.30 (-1.3 to 0.65)			0.36 (-0.40 to 1.1)		
H3000's	-0.52 (-1.2 to 0.12)			0.76 (-0.25 to 1.8)			0.93 (0.15 to 1.7)		
mean_UDexc_COV * group_char		0.79	0.79		0.99	0.99		0.31	0.41
mean_UDexc_COV * H2000's	0.01 (-0.01 to 0.03)			0.00 (-0.04 to 0.03)			0.01 (0.00 to 0.03)		
mean_UDexc_COV * H3000's	0.01 (-0.02 to 0.03)			0.00 (-0.04 to 0.03)			0.00 (-0.02 to 0.02)		
subj_char.sd(Intercept)	0.84 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.52 (NA to NA)			0.24 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	8						
	EEG	Theta		EEG	Alpha		EEC	6 Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.75 (0.31 to 1.2)	< 0.001	0.001	1.3 (0.61 to 2.0)	< 0.001	< 0.001	0.70 (0.17 to 1.2)	0.009	0.038
mean_UDexc_mean	15 (6.9 to 24)	< 0.001	0.001	-0.18 (-15 to 15)	0.98	0.98	0.13 (-6.6 to 6.8)	0.97	0.97
group_char		0.18	0.25		0.20	0.40		0.019	0.039
H1000's	_			_			_		
H2000's	-0.54 (-1.2 to 0.07)			-0.17 (-1.1 to 0.79)			0.79 (0.04 to 1.5)		
H3000's	-0.45 (-1.1 to 0.20)			0.72 (-0.30 to 1.7)			1.1 (0.28 to 1.8)		
mean_UDexc_mean * group_char		0.80	0.80		0.73	0.97		0.034	0.046
mean_UDexc_mean * H2000's	-3.6 (-15 to 7.5)			-6.5 (-26 to 13)			-12 (-20 to -2.6)		
mean_UDexc_mean * H3000's	-3.0 (-15 to 9.0)			0.78 (-20 to 22)			-3.9 (-14 to 5.8)		
subj_char.sd(Intercept)	0.85 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.29 (NA to NA)			0.52 (NA to NA)			0.23 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean StanceDur	for Cluster:	8						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.4 (0.96 to 1.8)	< 0.001	< 0.001	1.1 (0.46 to 1.7)	< 0.001	0.003	0.62 (0.10 to 1.1)	0.020	0.039
mean_StanceDur	-0.22 (-0.34 to -0.09)	< 0.001	0.001	0.15 (-0.06 to 0.36)	0.16	0.32	0.07 (-0.03 to 0.16)	0.16	0.16
group_char		0.091	0.12		0.25	0.33		0.12	0.15
H1000's	_			_			_		
H2000's	-0.68 (-1.3 to -0.06)			-0.43 (-1.4 to 0.52)			0.24 (-0.50 to 0.99)		
H3000's	-0.42 (-1.1 to 0.23)			0.47 (-0.55 to 1.5)			0.82 (0.04 to 1.6)		
mean_StanceDur * group_char		0.71	0.71		0.43	0.43		0.010	0.039
mean_StanceDur * H2000's	0.00 (-0.24 to 0.25)			0.14 (-0.27 to 0.55)			0.28 (0.09 to 0.47)		
mean_StanceDur * H3000's	-0.13 (-0.46 to 0.19)			0.34 (-0.21 to 0.89)			0.17 (-0.08 to 0.42)		
subj_char.sd(Intercept)	0.85 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.51 (NA to NA)			0.23 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	8						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.4 (1.0 to 1.9)	< 0.001	< 0.001	1.1 (0.39 to 1.7)	0.002	0.008	0.60 (0.08 to 1.1)	0.024	0.048
mean_GaitCycleDur	-0.19 (-0.29 to -0.08)	< 0.001	< 0.001	0.12 (-0.06 to 0.30)	0.18	0.35	0.05 (-0.03 to 0.13)	0.19	0.19
group_char		0.10	0.14		0.26	0.35		0.15	0.19
H1000's	_			_			_		
H2000's	-0.70 (-1.4 to -0.05)			-0.51 (-1.5 to 0.50)			0.15 (-0.62 to 0.91)		
H3000's	-0.36 (-1.1 to 0.34)			0.45 (-0.66 to 1.6)			0.77 (-0.04 to 1.6)		
mean_GaitCycleDur * group_char		0.56	0.56		0.46	0.46		0.005	0.020
mean_GaitCycleDur * H2000's	0.01 (-0.19 to 0.22)			0.15 (-0.20 to 0.50)			0.25 (0.10 to 0.41)		
mean_GaitCycleDur * H3000's	-0.15 (-0.43 to 0.13)			0.26 (-0.22 to 0.74)			0.16 (-0.06 to 0.38)		
subj_char.sd(Intercept)	0.85 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.51 (NA to NA)			0.23 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	8						
	EEG The	ta		EEG	Alpha		EEG		
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.85 (0.44 to 1.3)	< 0.001	< 0.001	1.3 (0.70 to 2.0)	< 0.001	< 0.001	0.71 (0.19 to 1.2)	0.007	0.030
mean_PeakUpDownVel_mean	1.1 (0.43 to 1.7)	< 0.001	0.002	-0.21 (-1.3 to 0.89)	0.71	0.88	-0.02 (-0.51 to 0.48)	0.94	0.94
group_char		0.12	0.16		0.088	0.18		0.017	0.034
H1000's	_			_			_		
H2000's	-0.59 (-1.2 to 0.00)			-0.22 (-1.1 to 0.69)			0.74 (0.00 to 1.5)		
H3000's	-0.45 (-1.1 to 0.17)			0.82 (-0.14 to 1.8)			1.1 (0.31 to 1.8)		
mean_PeakUpDownVel_mean * group_char		0.83	0.83		0.88	0.88		0.033	0.044
mean_PeakUpDownVel_mean * H2000's	-0.21 (-1.1 to 0.65)			-0.38 (-1.9 to 1.1)			-0.89 (-1.6 to -0.22)		
mean_PeakUpDownVel_mean * H3000's	-0.27 (-1.2 to 0.64)			-0.24 (-1.8 to 1.3)			-0.43 (-1.1 to 0.29)		
subj_char.sd(Intercept)	0.85 (NA to NA)			1.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.52 (NA to NA)			0.23 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	9						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.72 (0.30 to 1.1)	< 0.001	0.003	2.4 (1.2 to 3.6)	< 0.001	< 0.001	1.4 (0.75 to 2.0)	< 0.001	< 0.001
mean_APexc_COV	0.00 (-0.02 to 0.02)	0.71	0.94	0.02 (-0.02 to 0.05)	0.43	0.58	0.01 (-0.01 to 0.02)	0.60	0.79
group_char		0.94	0.94		0.34	0.58		0.22	0.43
H1000's	_			_			_		
H2000's	-0.12 (-0.81 to 0.57)			0.39 (-1.5 to 2.3)			0.87 (-0.15 to 1.9)		
H3000's	-0.02 (-0.70 to 0.67)			-1.1 (-3.0 to 0.80)			0.12 (-0.91 to 1.2)		
mean_APexc_COV * group_char		0.87	0.94		0.80	0.80		0.79	0.79
mean_APexc_COV * H2000's	0.00 (-0.03 to 0.03)			-0.01 (-0.07 to 0.04)			-0.01 (-0.03 to 0.02)		
mean_APexc_COV * H3000's	-0.01 (-0.04 to 0.02)			-0.02 (-0.07 to 0.03)			0.00 (-0.02 to 0.03)		
subj_char.sd(Intercept)	0.60 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.32 (NA to NA)			0.57 (NA to NA)			0.28 (NA to NA)		

## $LME~EEG \sim 1 + kin + group + kin:group 2$

CI = Confidence Interval
 False discovery rate correction for multiple testing

mean APexc mean	for Cluster:	9						
EEG	Theta		EEG	Alpha		EEG	Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
0.79 (0.44 to 1.1)	< 0.001	< 0.001	2.2 (1.1 to 3.3)	< 0.001	< 0.001	1.3 (0.66 to 1.9)	< 0.001	< 0.001
-2.6 (-6.9 to 1.8)	0.25	0.31	8.1 (0.28 to 16)	0.042	0.085	3.6 (-0.16 to 7.4)	0.061	0.084
	0.31	0.31		0.63	0.63		0.47	0.47
_			_			_		
-0.34 (-0.86 to 0.19)			0.21 (-1.5 to 1.9)			0.55 (-0.38 to 1.5)		
0.08 (-0.49 to 0.66)			-0.66 (-2.4 to 1.1)			0.43 (-0.54 to 1.4)		
	0.10	0.21		0.19	0.25		0.063	0.084
1.9 (-5.6 to 9.4)			1.6 (-12 to 15)			5.5 (-1.1 to 12)		
-8.6 (-18 to 0.54)			-14 (-31 to 2.3)			-4.8 (-13 to 3.2)		
0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
0.31 (NA to NA)			0.56 (NA to NA)			0.27 (NA to NA)		
	EEG Beta (95% CI) 0.79 (0.44 to 1.1) -2.6 (-6.9 to 1.8)  -0.34 (-0.86 to 0.19) 0.08 (-0.49 to 0.66)  1.9 (-5.6 to 9.4) -8.6 (-18 to 0.54) 0.61 (NA to NA)	0.79 (0.44 to 1.1) < 0.001 -2.6 (-6.9 to 1.8) 0.25 0.31 	EEG Theta           Beta (95% CI)         p-value         q-value           0.79 (0.44 to 1.1)         <0.001	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	9						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.14 to 0.88)	0.007	0.027	2.6 (1.5 to 3.8)	< 0.001	< 0.001	1.5 (0.84 to 2.1)	< 0.001	< 0.001
mean_MLexc_COV	0.01 (-0.01 to 0.03)	0.30	0.49	0.00 (-0.03 to 0.04)	0.88	0.97	0.00 (-0.02 to 0.02)	0.95	0.95
group_char		0.39	0.49		0.22	0.43		0.11	0.21
H1000's	_			_			_		
H2000's	-0.37 (-0.91 to 0.16)			0.24 (-1.4 to 1.9)			1.0 (0.06 to 1.9)		
H3000's	-0.16 (-0.73 to 0.41)			-1.3 (-3.0 to 0.47)			0.31 (-0.66 to 1.3)		
mean_MLexc_COV * group_char		0.49	0.49		0.97	0.97		0.28	0.38
mean_MLexc_COV * H2000's	0.01 (-0.01 to 0.04)			0.00 (-0.05 to 0.04)			-0.02 (-0.04 to 0.00)		
mean_MLexc_COV * H3000's	0.00 (-0.03 to 0.02)			-0.01 (-0.06 to 0.05)			-0.01 (-0.03 to 0.02)		
subj_char.sd(Intercept)	0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.32 (NA to NA)			0.57 (NA to NA)			0.28 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_mean	for Cluster:	9						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.80 (0.46 to 1.1)	< 0.001	< 0.001	2.4 (1.3 to 3.5)	< 0.001	< 0.001	1.4 (0.75 to 2.0)	< 0.001	< 0.001
mean_MLexc_mean	-1.8 (-4.6 to 0.99)	0.20	0.41	2.7 (-2.4 to 7.9)	0.30	0.45	1.4 (-1.0 to 3.9)	0.25	0.34
group_char		0.72	0.96		0.34	0.45		0.52	0.52
H1000's	_			_			_		
H2000's	-0.18 (-0.68 to 0.32)			0.15 (-1.5 to 1.8)			0.54 (-0.38 to 1.5)		
H3000's	-0.18 (-0.71 to 0.34)			-1.1 (-2.8 to 0.63)			0.21 (-0.74 to 1.2)		
mean_MLexc_mean * group_char		0.97	0.97		0.54	0.54		0.22	0.34
mean_MLexc_mean * H2000's	-0.34 (-4.0 to 3.3)			0.14 (-6.5 to 6.8)			2.2 (-0.97 to 5.4)		
mean_MLexc_mean * H3000's	-0.50 (-4.6 to 3.6)			-3.5 (-11 to 4.0)			-0.33 (-3.9 to 3.2)		
subj_char.sd(Intercept)	0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.57 (NA to NA)			0.27 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	9						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.79 (0.48 to 1.1)	< 0.001	< 0.001	2.3 (1.3 to 3.4)	< 0.001	< 0.001	1.3 (0.73 to 1.9)	< 0.001	< 0.001
mean_StepDur	-0.15 (-0.35 to 0.04)	0.13	0.26	0.35 (-0.01 to 0.70)	0.056	0.11	0.16 (-0.01 to 0.33)	0.069	0.14
group_char		0.86	0.86		0.39	0.52		0.58	0.58
H1000's	_			_			_		
H2000's	-0.14 (-0.66 to 0.37)			0.13 (-1.5 to 1.8)			0.49 (-0.43 to 1.4)		
H3000's	-0.08 (-0.64 to 0.47)			-1.0 (-2.8 to 0.68)			0.23 (-0.73 to 1.2)		
mean_StepDur * group_char		0.55	0.73		0.69	0.69		0.13	0.18
mean_StepDur * H2000's	-0.14 (-0.56 to 0.29)			0.15 (-0.62 to 0.91)			0.37 (0.00 to 0.74)		
mean_StepDur * H3000's	-0.26 (-0.79 to 0.26)			-0.34 (-1.3 to 0.60)			-0.01 (-0.47 to 0.44)		
subj_char.sd(Intercept)	0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.56 (NA to NA)			0.27 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	9						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.78 (0.47 to 1.1)	< 0.001	< 0.001	2.5 (1.4 to 3.5)	< 0.001	< 0.001	1.3 (0.75 to 1.9)	< 0.001	< 0.001
mean_UDexc_COV	-0.01 (-0.02 to 0.00)	0.13	0.27	0.02 (-0.01 to 0.04)	0.20	0.30	0.01 (0.00 to 0.02)	0.062	0.12
group_char		0.57	0.76		0.23	0.30		0.29	0.39
H1000's	_			_			_		
H2000's	-0.22 (-0.67 to 0.24)			0.21 (-1.4 to 1.8)			0.71 (-0.19 to 1.6)		
H3000's	-0.21 (-0.70 to 0.28)			-1.2 (-2.9 to 0.45)			0.17 (-0.77 to 1.1)		
mean_UDexc_COV * group_char		>0.99	>0.99		0.82	0.82		0.97	0.97
mean_UDexc_COV * H2000's	0.00 (-0.02 to 0.02)			0.00 (-0.04 to 0.03)			0.00 (-0.01 to 0.02)		
mean_UDexc_COV * H3000's	0.00 (-0.02 to 0.02)			-0.01 (-0.05 to 0.03)			0.00 (-0.02 to 0.02)		
subj_char.sd(Intercept)	0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.32 (NA to NA)			0.57 (NA to NA)			0.27 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

mean UDexc mean	for Cluster:	9						
			EEG	Alpha		EEG	Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
0.47 (0.15 to 0.79)	0.004	0.015	2.7 (1.6 to 3.8)	< 0.001	< 0.001	1.6 (0.97 to 2.2)	< 0.001	< 0.001
7.7 (-0.40 to 16)	0.063	0.13	-2.0 (-17 to 13)	0.80	0.95	-4.1 (-11 to 3.0)	0.25	0.32
	0.31	0.41		0.17	0.33		0.14	0.28
_			_			_		
-0.30 (-0.77 to 0.17)			0.26 (-1.3 to 1.9)			0.91 (0.01 to 1.8)		
-0.34 (-0.85 to 0.16)			-1.3 (-3.0 to 0.35)			0.36 (-0.58 to 1.3)		
	0.79	0.79		0.95	0.95		0.32	0.32
3.1 (-8.1 to 14)			-3.3 (-24 to 18)			-7.0 (-17 to 2.9)		
4.0 (-8.2 to 16)			-1.0 (-24 to 22)			-6.4 (-17 to 4.3)		
0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
0.31 (NA to NA)			0.57 (NA to NA)			0.27 (NA to NA)		
	Beta (95% CI) 0.47 (0.15 to 0.79) 7.7 (-0.40 to 16) -0.30 (-0.77 to 0.17) -0.34 (-0.85 to 0.16) 3.1 (-8.1 to 14) 4.0 (-8.2 to 16) 0.61 (NA to NA)	EEG Theta  Beta (95% CI) p-value  0.47 (0.15 to 0.79) 0.004  7.7 (-0.40 to 16) 0.063  0.31  -0.30 (-0.77 to 0.17)  -0.34 (-0.85 to 0.16)  3.1 (-8.1 to 14)  4.0 (-8.2 to 16)  0.61 (NA to NA)	EEG Theta  Beta (95% CI) p-value 0.015  0.47 (0.15 to 0.79) 0.004  7.7 (-0.40 to 16) 0.063 0.13  0.31 0.41  -0.30 (-0.77 to 0.17)  -0.34 (-0.85 to 0.16)  3.1 (-8.1 to 14) 4.0 (-8.2 to 16)  0.61 (NA to NA)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	9						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.77 (0.47 to 1.1)	< 0.001	< 0.001	2.4 (1.3 to 3.4)	< 0.001	< 0.001	1.4 (0.77 to 2.0)	< 0.001	< 0.001
mean_StanceDur	-0.09 (-0.21 to 0.03)	0.13	0.27	0.21 (0.00 to 0.42)	0.047	0.094	0.09 (-0.01 to 0.20)	0.068	0.14
group_char		0.75	0.75		0.31	0.42		0.46	0.46
H1000's	_			_			_		
H2000's	-0.18 (-0.65 to 0.29)			0.17 (-1.4 to 1.8)			0.58 (-0.33 to 1.5)		
H3000's	-0.11 (-0.61 to 0.39)			-1.1 (-2.8 to 0.57)			0.22 (-0.73 to 1.2)		
mean_StanceDur * group_char		0.57	0.75		0.71	0.71		0.24	0.32
mean_StanceDur * H2000's	-0.06 (-0.31 to 0.18)			0.06 (-0.39 to 0.50)			0.18 (-0.03 to 0.40)		
mean_StanceDur * H3000's	-0.16 (-0.46 to 0.15)			-0.20 (-0.75 to 0.35)			0.00 (-0.27 to 0.26)		
subj_char.sd(Intercept)	0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.56 (NA to NA)			0.27 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	9						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.79 (0.48 to 1.1)	< 0.001	< 0.001	2.3 (1.3 to 3.4)	< 0.001	< 0.001	1.3 (0.73 to 1.9)	< 0.001	< 0.001
mean_GaitCycleDur	-0.08 (-0.18 to 0.02)	0.13	0.26	0.17 (0.00 to 0.35)	0.055	0.11	0.08 (-0.01 to 0.16)	0.069	0.14
group_char		0.86	0.86		0.39	0.52		0.58	0.58
H1000's	_			_			_		
H2000's	-0.14 (-0.66 to 0.37)			0.13 (-1.5 to 1.8)			0.49 (-0.43 to 1.4)		
H3000's	-0.08 (-0.63 to 0.48)			-1.0 (-2.8 to 0.68)			0.23 (-0.73 to 1.2)		
mean_GaitCycleDur * group_char		0.54	0.72		0.69	0.69		0.13	0.18
mean_GaitCycleDur * H2000's	-0.07 (-0.28 to 0.14)			0.07 (-0.31 to 0.45)			0.18 (0.00 to 0.37)		
mean_GaitCycleDur * H3000's	-0.13 (-0.40 to 0.13)			-0.17 (-0.64 to 0.30)			-0.01 (-0.23 to 0.22)		
subj_char.sd(Intercept)	0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.56 (NA to NA)			0.27 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	9						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.53 (0.24 to 0.83)	< 0.001	0.002	2.8 (1.7 to 3.8)	< 0.001	< 0.001	1.5 (0.96 to 2.1)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.52 (-0.09 to 1.1)	0.094	0.19	-0.42 (-1.5 to 0.69)	0.46	0.61	-0.30 (-0.82 to 0.22)	0.26	0.26
group_char		0.27	0.35		0.13	0.27		0.12	0.23
H1000's	_			_			_		
H2000's	-0.29 (-0.73 to 0.16)			0.26 (-1.3 to 1.8)			0.93 (0.03 to 1.8)		
H3000's	-0.35 (-0.82 to 0.12)			-1.4 (-3.0 to 0.26)			0.33 (-0.60 to 1.3)		
mean_PeakUpDownVel_mean * group_char		0.75	0.75		0.88	0.88		0.17	0.23
mean_PeakUpDownVel_mean * H2000's	0.20 (-0.65 to 1.0)			-0.26 (-1.8 to 1.3)			-0.69 (-1.4 to 0.04)		
mean_PeakUpDownVel_mean * H3000's	0.36 (-0.57 to 1.3)			0.16 (-1.5 to 1.9)			-0.47 (-1.3 to 0.33)		
subj_char.sd(Intercept)	0.61 (NA to NA)			2.5 (NA to NA)			1.4 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.57 (NA to NA)			0.26 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	10						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.5 (0.92 to 2.0)	< 0.001	< 0.001	0.72 (0.20 to 1.2)	0.007	0.027	1.3 (0.82 to 1.8)	< 0.001	< 0.001
mean_APexc_COV	0.00 (-0.02 to 0.02)	0.91	0.93	0.00 (-0.02 to 0.02)	0.90	0.90	0.00 (-0.02 to 0.01)	0.53	0.53
group_char		0.36	0.73		0.17	0.22		0.53	0.53
H1000's	_			_			_		
H2000's	-0.52 (-1.3 to 0.28)			0.46 (-0.33 to 1.3)			0.29 (-0.46 to 1.0)		
H3000's	-0.47 (-1.3 to 0.36)			-0.37 (-1.2 to 0.45)			-0.18 (-0.97 to 0.62)		
mean_APexc_COV * group_char		0.93	0.93		0.12	0.22		0.15	0.30
mean_APexc_COV * H2000's	0.00 (-0.03 to 0.03)			-0.01 (-0.04 to 0.01)			0.00 (-0.02 to 0.02)		
mean_APexc_COV * H3000's	0.00 (-0.03 to 0.03)			0.01 (-0.02 to 0.04)			0.01 (0.00 to 0.03)		
subj_char.sd(Intercept)	0.96 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.36 (NA to NA)			0.34 (NA to NA)			0.22 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

mean_APexc_mean	for Cluster:	10						
EEG	Theta		EEG .	Alpha		EEG	Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
1.5 (1.1 to 2.0)	< 0.001	< 0.001	0.59 (0.12 to 1.1)	0.013	0.052	1.1 (0.61 to 1.6)	< 0.001	< 0.001
-1.1 (-6.2 to 4.0)	0.68	0.68	2.0 (-3.0 to 6.9)	0.44	0.75	2.9 (-0.15 to 6.0)	0.062	0.12
	0.45	0.61		0.74	0.75		0.88	0.88
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-0.40 (-1.1 to 0.29)			0.08 (-0.62 to 0.77)			0.10 (-0.60 to 0.81)		
-0.36 (-1.1 to 0.36)			-0.21 (-0.93 to 0.51)			0.19 (-0.56 to 0.93)		
	0.44	0.61		0.75	0.75		0.13	0.18
-5.1 (-13 to 3.0)			1.4 (-6.5 to 9.2)			4.7 (-0.16 to 9.6)		
-3.5 (-12 to 5.3)			3.2 (-5.2 to 12)			0.20 (-5.1 to 5.5)		
0.95 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
0.36 (NA to NA)			0.34 (NA to NA)			0.21 (NA to NA)		
	Beta (95% CI) 1.5 (1.1 to 2.0) -1.1 (-6.2 to 4.0) -0.40 (-1.1 to 0.29) -0.36 (-1.1 to 0.36) -5.1 (-13 to 3.0) -3.5 (-12 to 5.3) 0.95 (NA to NA)	EEG Theta  Beta (95% CI) p-value  1.5 (1.1 to 2.0) < 0.001  -1.1 (-6.2 to 4.0) 0.68  0.45  -0.40 (-1.1 to 0.29)  -0.36 (-1.1 to 0.36)  -5.1 (-13 to 3.0)  -3.5 (-12 to 5.3)  0.95 (NA to NA)	EEG Theta           Beta (95% CI)         p-value         q-value           1.5 (1.1 to 2.0)         <0.001	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	10						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.2 (0.69 to 1.7)	< 0.001	< 0.001	0.71 (0.22 to 1.2)	0.004	0.018	1.3 (0.83 to 1.8)	< 0.001	< 0.001
mean_MLexc_COV	0.02 (0.00 to 0.04)	0.052	0.10	0.00 (-0.02 to 0.02)	0.95	0.95	0.00 (-0.02 to 0.01)	0.48	0.64
group_char		0.14	0.18		0.63	0.95		0.53	0.64
H1000's	_			_			_		
H2000's	-0.71 (-1.4 to -0.01)			0.09 (-0.61 to 0.79)			0.40 (-0.31 to 1.1)		
H3000's	-0.27 (-1.0 to 0.46)			-0.27 (-1.0 to 0.47)			0.25 (-0.50 to 1.0)		
mean_MLexc_COV * group_char		0.36	0.36		0.75	0.95		0.64	0.64
mean_MLexc_COV * H2000's	0.01 (-0.02 to 0.04)			0.00 (-0.03 to 0.03)			-0.01 (-0.03 to 0.01)		
mean_MLexc_COV * H3000's	-0.01 (-0.04 to 0.02)			0.01 (-0.02 to 0.04)			-0.01 (-0.03 to 0.01)		
subj_char.sd(Intercept)	0.94 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.35 (NA to NA)			0.35 (NA to NA)			0.22 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_mean	for Cluster:	10						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.8 (1.3 to 2.2)	< 0.001	< 0.001	0.67 (0.21 to 1.1)	0.004	0.017	1.0 (0.58 to 1.5)	< 0.001	< 0.001
mean_MLexc_mean	-3.4 (-6.4 to -0.45)	0.024	0.048	0.40 (-2.6 to 3.4)	0.79	0.90	2.4 (0.53 to 4.2)	0.012	0.023
group_char		0.18	0.24		0.69	0.90		0.76	0.98
H1000's	_			_			_		
H2000's	-0.51 (-1.2 to 0.14)			0.16 (-0.50 to 0.83)			0.26 (-0.44 to 0.95)		
H3000's	-0.58 (-1.3 to 0.12)			-0.15 (-0.85 to 0.56)			0.16 (-0.58 to 0.90)		
mean_MLexc_mean * group_char		0.50	0.50		0.90	0.90		0.98	0.98
mean_MLexc_mean * H2000's	-0.87 (-4.6 to 2.8)			-0.54 (-4.3 to 3.2)			0.09 (-2.2 to 2.4)		
mean_MLexc_mean * H3000's	1.3 (-2.8 to 5.3)			0.29 (-3.8 to 4.4)			-0.15 (-2.7 to 2.4)		
subj_char.sd(Intercept)	0.96 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.34 (NA to NA)			0.35 (NA to NA)			0.21 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	10						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.5 (1.1 to 1.9)	< 0.001	< 0.001	0.54 (0.11 to 0.97)	0.014	0.057	1.1 (0.63 to 1.5)	< 0.001	< 0.001
mean_StepDur	-0.04 (-0.26 to 0.18)	0.70	0.72	0.17 (-0.04 to 0.39)	0.11	0.23	0.17 (0.03 to 0.30)	0.013	0.026
group_char		0.72	0.72		0.87	0.93		0.96	0.96
H1000's	_			_			_		
H2000's	-0.27 (-0.94 to 0.40)			0.16 (-0.51 to 0.84)			0.10 (-0.60 to 0.80)		
H3000's	-0.15 (-0.89 to 0.59)			0.00 (-0.75 to 0.74)			0.01 (-0.75 to 0.77)		
mean_StepDur * group_char		0.054	0.11		0.93	0.93		0.061	0.081
mean_StepDur * H2000's	-0.47 (-0.92 to -0.02)			-0.02 (-0.46 to 0.41)			0.29 (0.02 to 0.55)		
mean_StepDur * H3000's	-0.51 (-1.1 to 0.11)			-0.12 (-0.72 to 0.48)			0.27 (-0.10 to 0.64)		
subj_char.sd(Intercept)	0.95 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.35 (NA to NA)			0.34 (NA to NA)			0.21 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	10						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.6 (1.2 to 2.0)	< 0.001	< 0.001	0.64 (0.21 to 1.1)	0.003	0.013	1.1 (0.64 to 1.6)	< 0.001	< 0.001
mean_UDexc_COV	-0.01 (-0.02 to 0.01)	0.26	0.36	0.00 (-0.01 to 0.02)	0.50	0.67	0.01 (0.00 to 0.02)	0.012	0.023
group_char		0.27	0.36		0.67	0.67		0.70	0.76
H1000's	_			_			_		
H2000's	-0.49 (-1.1 to 0.15)			0.25 (-0.39 to 0.88)			0.29 (-0.39 to 0.98)		
H3000's	-0.42 (-1.1 to 0.28)			-0.03 (-0.73 to 0.66)			0.08 (-0.66 to 0.82)		
mean_UDexc_COV * group_char		0.67	0.67		0.62	0.67		0.76	0.76
mean_UDexc_COV * H2000's	-0.01 (-0.03 to 0.01)			-0.01 (-0.03 to 0.01)			0.00 (-0.01 to 0.01)		
mean_UDexc_COV * H3000's	0.00 (-0.03 to 0.02)			-0.01 (-0.03 to 0.02)			0.00 (-0.01 to 0.02)		
subj_char.sd(Intercept)	0.97 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.35 (NA to NA)			0.35 (NA to NA)			0.22 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	10						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.4 (0.92 to 1.8)	< 0.001	< 0.001	0.70 (0.26 to 1.1)	0.002	0.007	1.4 (0.91 to 1.8)	< 0.001	< 0.001
mean_UDexc_mean	4.9 (-3.9 to 14)	0.28	0.28	0.11 (-8.6 to 8.8)	0.98	0.98	-5.5 (-11 to -0.03)	0.049	0.10
group_char		0.024	0.049		0.77	0.98		0.64	0.84
H1000's	_			_			_		
H2000's	-0.88 (-1.5 to -0.24)			0.03 (-0.62 to 0.67)			0.32 (-0.37 to 1.0)		
H3000's	-0.56 (-1.2 to 0.12)			-0.22 (-0.90 to 0.47)			0.20 (-0.53 to 0.94)		
mean_UDexc_mean * group_char		0.26	0.28		0.78	0.98		0.84	0.84
mean_UDexc_mean * H2000's	10 (-2.1 to 22)			3.8 (-8.4 to 16)			-1.1 (-8.8 to 6.5)		
mean_UDexc_mean * H3000's	3.9 (-9.2 to 17)			4.0 (-9.0 to 17)			-2.5 (-11 to 5.7)		
subj_char.sd(Intercept)	0.96 (NA to NA)			0.96 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.35 (NA to NA)			0.35 (NA to NA)			0.22 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	10						
	EEG	Theta	,	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.5 (1.1 to 1.9)	< 0.001	< 0.001	0.57 (0.15 to 0.99)	0.008	0.031	1.1 (0.66 to 1.6)	< 0.001	< 0.001
mean_StanceDur	-0.03 (-0.16 to 0.10)	0.69	0.69	0.10 (-0.02 to 0.23)	0.11	0.21	0.10 (0.02 to 0.18)	0.014	0.029
group_char		0.51	0.68		0.81	0.92		0.89	0.89
H1000's	_			_			_		
H2000's	-0.37 (-1.0 to 0.27)			0.18 (-0.46 to 0.82)			0.16 (-0.52 to 0.85)		
H3000's	-0.23 (-0.92 to 0.47)			-0.03 (-0.73 to 0.67)			0.04 (-0.70 to 0.78)		
mean_StanceDur * group_char		0.078	0.16		0.92	0.92		0.11	0.15
mean_StanceDur * H2000's	-0.25 (-0.51 to 0.01)			-0.04 (-0.29 to 0.21)			0.14 (-0.01 to 0.30)		
mean_StanceDur * H3000's	-0.28 (-0.64 to 0.07)			-0.06 (-0.41 to 0.29)			0.16 (-0.06 to 0.37)		
subj_char.sd(Intercept)	0.95 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.35 (NA to NA)			0.34 (NA to NA)			0.21 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	10						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.5 (1.1 to 1.9)	< 0.001	< 0.001	0.54 (0.11 to 0.97)	0.014	0.058	1.1 (0.63 to 1.5)	< 0.001	< 0.001
mean_GaitCycleDur	-0.02 (-0.13 to 0.09)	0.71	0.72	0.09 (-0.02 to 0.19)	0.11	0.23	0.08 (0.02 to 0.15)	0.013	0.026
group_char		0.72	0.72		0.88	0.93		0.96	0.96
H1000's	_			_			_		
H2000's	-0.28 (-0.95 to 0.39)			0.16 (-0.51 to 0.84)			0.10 (-0.60 to 0.80)		
H3000's	-0.15 (-0.89 to 0.59)			0.00 (-0.75 to 0.74)			0.01 (-0.75 to 0.77)		
mean_GaitCycleDur * group_char		0.056	0.11		0.93	0.93		0.062	0.083
mean_GaitCycleDur * H2000's	-0.23 (-0.45 to -0.01)			-0.01 (-0.23 to 0.21)			0.14 (0.01 to 0.27)		
mean_GaitCycleDur * H3000's	-0.25 (-0.56 to 0.05)			-0.06 (-0.36 to 0.24)			0.14 (-0.05 to 0.32)		
subj_char.sd(Intercept)	0.95 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.35 (NA to NA)			0.34 (NA to NA)			0.21 (NA to NA)		
Residual.sd_Observation	0.35 (NA to NA)			0.34 (NA to NA)			0.21 (NA to NA)		

 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	10						
	EEG The	ta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	1.4 (1.0 to 1.8)	< 0.001	< 0.001	0.75 (0.33 to 1.2)	< 0.001	0.002	1.3 (0.89 to 1.8)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.25 (-0.41 to 0.91)	0.46	0.46	-0.21 (-0.87 to 0.44)	0.52	0.69	-0.44 (-0.84 to -0.03)	0.036	0.071
group_char		0.021	0.041		0.69	0.69		0.61	0.81
H1000's	_			_			_		
H2000's	-0.84 (-1.5 to -0.23)			0.02 (-0.60 to 0.64)			0.34 (-0.34 to 1.0)		
H3000's	-0.59 (-1.3 to 0.06)			-0.25 (-0.92 to 0.41)			0.21 (-0.52 to 0.93)		
mean_PeakUpDownVel_mean * group_char		0.22	0.30		0.54	0.69		0.82	0.82
mean_PeakUpDownVel_mean * H2000's	0.82 (-0.11 to 1.7)			0.39 (-0.52 to 1.3)			-0.15 (-0.72 to 0.41)		
mean_PeakUpDownVel_mean * H3000's	0.43 (-0.56 to 1.4)			0.52 (-0.46 to 1.5)			-0.17 (-0.78 to 0.43)		
subj_char.sd(Intercept)	0.95 (NA to NA)			0.97 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.35 (NA to NA)			0.35 (NA to NA)			0.21 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	11						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.54 (-0.02 to 1.1)	0.060	0.24	4.1 (2.7 to 5.5)	< 0.001	< 0.001	2.0 (1.3 to 2.7)	< 0.001	< 0.001
mean_APexc_COV	0.00 (-0.03 to 0.02)	0.76	0.76	-0.05 (-0.10 to 0.01)	0.10	0.20	-0.01 (-0.04 to 0.02)	0.42	0.85
group_char		0.55	0.76		0.39	0.50		0.77	0.89
H1000's	_			_			_		
H2000's	-0.35 (-1.2 to 0.50)			-1.5 (-3.6 to 0.66)			-0.12 (-1.2 to 0.96)		
H3000's	0.12 (-0.67 to 0.92)			-0.44 (-2.4 to 1.6)			-0.36 (-1.4 to 0.63)		
mean_APexc_COV * group_char		0.64	0.76		0.50	0.50		0.89	0.89
mean_APexc_COV * H2000's	0.01 (-0.02 to 0.04)			0.03 (-0.04 to 0.10)			-0.01 (-0.05 to 0.03)		
mean_APexc_COV * H3000's	0.01 (-0.01 to 0.04)			0.04 (-0.02 to 0.10)			0.00 (-0.03 to 0.03)		
subj_char.sd(Intercept)	0.91 (NA to NA)			2.4 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.61 (NA to NA)			0.34 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_APexc_mean	for Cluster:	11						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.48 (-0.01 to 0.98)	0.057	0.23	3.4 (2.2 to 4.7)	< 0.001	< 0.001	1.7 (1.1 to 2.3)	< 0.001	< 0.001
mean_APexc_mean	-0.06 (-4.6 to 4.5)	0.98	0.98	-0.28 (-11 to 10)	0.96	0.96	1.9 (-4.3 to 8.0)	0.55	0.77
group_char		0.15	0.29		0.49	0.66		0.57	0.77
H1000's	_			_			_		
H2000's	-0.25 (-1.0 to 0.50)			-1.2 (-3.1 to 0.76)			-0.28 (-1.2 to 0.65)		
H3000's	0.48 (-0.23 to 1.2)			-0.58 (-2.4 to 1.2)			-0.47 (-1.3 to 0.41)		
mean_APexc_mean * group_char		0.75	0.98		0.19	0.38		0.98	0.98
mean_APexc_mean * H2000's	1.1 (-6.4 to 8.6)			2.2 (-15 to 20)			-0.87 (-11 to 9.3)		
mean_APexc_mean * H3000's	-1.7 (-8.3 to 4.9)			14 (-1.7 to 29)			0.07 (-8.9 to 9.0)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.61 (NA to NA)			0.35 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	11						
-	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.41 (-0.10 to 0.92)	0.11	0.15	3.7 (2.4 to 5.0)	< 0.001	< 0.001	1.8 (1.2 to 2.5)	< 0.001	< 0.001
mean_MLexc_COV	0.00 (-0.01 to 0.02)	0.61	0.61	-0.02 (-0.06 to 0.03)	0.43	0.58	0.00 (-0.03 to 0.02)	0.79	0.83
group_char		0.027	0.11		0.28	0.57		0.73	0.83
H1000's	_			_			_		
H2000's	-0.29 (-1.0 to 0.46)			-1.3 (-3.2 to 0.64)			-0.21 (-1.1 to 0.72)		
H3000's	0.71 (-0.02 to 1.4)			0.17 (-1.7 to 2.0)			-0.37 (-1.3 to 0.55)		
mean_MLexc_COV * group_char		0.064	0.13		0.71	0.71		0.83	0.83
mean_MLexc_COV * H2000's	0.01 (-0.02 to 0.03)			0.01 (-0.05 to 0.08)			-0.01 (-0.04 to 0.02)		
mean_MLexc_COV * H3000's	-0.02 (-0.05 to 0.00)			-0.01 (-0.07 to 0.05)			-0.01 (-0.04 to 0.03)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.25 (NA to NA)			0.61 (NA to NA)			0.35 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_mean	for Cluster:	11						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.59 (0.11 to 1.1)	0.016	0.065	3.3 (2.1 to 4.5)	< 0.001	< 0.001	1.6 (1.0 to 2.2)	< 0.001	< 0.001
mean_MLexc_mean	-1.5 (-4.4 to 1.4)	0.31	0.41	1.6 (-5.1 to 8.3)	0.64	0.64	2.0 (-2.0 to 5.9)	0.33	0.57
group_char		0.58	0.58		0.56	0.64		0.43	0.57
H1000's	_			_			_		
H2000's	-0.19 (-0.91 to 0.53)			-0.89 (-2.7 to 0.92)			-0.29 (-1.2 to 0.59)		
H3000's	0.20 (-0.50 to 0.89)			-0.78 (-2.5 to 0.96)			-0.57 (-1.4 to 0.28)		
mean_MLexc_mean * group_char		0.21	0.41		0.009	0.017		0.79	0.79
mean_MLexc_mean * H2000's	0.24 (-3.4 to 3.9)			-2.2 (-11 to 6.3)			-0.96 (-5.9 to 4.0)		
mean_MLexc_mean * H3000's	2.6 (-0.96 to 6.2)			8.4 (0.18 to 17)			0.49 (-4.4 to 5.3)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.58 (NA to NA)			0.35 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	11						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.04 to 0.97)	0.034	0.14	3.3 (2.1 to 4.5)	< 0.001	< 0.001	1.7 (1.1 to 2.3)	< 0.001	< 0.001
mean_StepDur	-0.03 (-0.22 to 0.16)	0.78	0.88	0.10 (-0.33 to 0.53)	0.64	0.64	0.08 (-0.17 to 0.34)	0.52	0.52
group_char		0.42	0.84		0.41	0.55		0.21	0.34
H1000's	_			_			_		
H2000's	-0.17 (-0.91 to 0.57)			-0.95 (-2.8 to 0.91)			-0.30 (-1.2 to 0.61)		
H3000's	0.34 (-0.37 to 1.1)			-1.1 (-2.9 to 0.67)			-0.79 (-1.7 to 0.08)		
mean_StepDur * group_char		0.88	0.88		0.002	0.004		0.26	0.34
mean_StepDur * H2000's	-0.05 (-0.47 to 0.37)			-0.11 (-1.1 to 0.83)			-0.04 (-0.59 to 0.52)		
mean_StepDur * H3000's	0.09 (-0.34 to 0.51)			1.7 (0.70 to 2.6)			0.46 (-0.11 to 1.0)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.58 (NA to NA)			0.34 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	11						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.05 to 0.97)	0.030	0.12	3.5 (2.4 to 4.7)	< 0.001	< 0.001	1.7 (1.2 to 2.3)	< 0.001	< 0.001
mean_UDexc_COV	0.00 (-0.02 to 0.01)	0.73	0.87	-0.01 (-0.04 to 0.02)	0.46	0.46	0.00 (-0.01 to 0.02)	0.62	0.81
group_char		0.34	0.67		0.39	0.46		0.40	0.79
H1000's	_			_			_		
H2000's	-0.17 (-0.87 to 0.53)			-1.2 (-3.0 to 0.58)			-0.31 (-1.2 to 0.54)		
H3000's	0.36 (-0.32 to 1.1)			-0.79 (-2.6 to 0.98)			-0.58 (-1.4 to 0.26)		
mean_UDexc_COV * group_char		0.87	0.87		0.037	0.074		0.81	0.81
mean_UDexc_COV * H2000's	0.00 (-0.02 to 0.02)			0.01 (-0.03 to 0.06)			0.00 (-0.03 to 0.02)		
mean_UDexc_COV * H3000's	0.00 (-0.02 to 0.02)			0.06 (0.01 to 0.11)			0.01 (-0.02 to 0.03)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.4 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.60 (NA to NA)			0.35 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean UDexc mean	for Cluster:	11						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.39 (-0.08 to 0.86)	0.10	0.20	3.4 (2.1 to 4.6)	< 0.001	< 0.001	1.9 (1.3 to 2.4)	< 0.001	< 0.001
mean_UDexc_mean	3.6 (-3.9 to 11)	0.35	0.35	2.3 (-15 to 19)	0.80	0.80	-3.5 (-13 to 6.4)	0.48	0.65
group_char		0.056	0.20		0.11	0.14		0.75	0.75
H1000's	_			_			_		
H2000's	-0.26 (-0.97 to 0.45)			-1.0 (-2.9 to 0.80)			-0.33 (-1.2 to 0.53)		
H3000's	0.61 (-0.09 to 1.3)			1.0 (-0.76 to 2.8)			-0.12 (-0.97 to 0.72)		
mean_UDexc_mean * group_char		0.18	0.24		0.003	0.006		0.10	0.20
mean_UDexc_mean * H2000's	2.5 (-8.4 to 13)			-0.90 (-26 to 24)			-0.22 (-15 to 14)		
mean_UDexc_mean * H3000's	-8.0 (-19 to 3.3)			-40 (-66 to -14)			-14 (-29 to 0.35)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.4 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.25 (NA to NA)			0.58 (NA to NA)			0.34 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	11						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.50 (0.04 to 0.96)	0.031	0.13	3.3 (2.2 to 4.5)	< 0.001	< 0.001	1.7 (1.2 to 2.3)	< 0.001	< 0.001
mean_StanceDur	-0.02 (-0.13 to 0.10)	0.77	0.78	0.06 (-0.20 to 0.32)	0.64	0.64	0.05 (-0.10 to 0.21)	0.50	0.50
group_char		0.39	0.78		0.48	0.64		0.27	0.45
H1000's	_			_			_		
H2000's	-0.17 (-0.88 to 0.54)			-0.97 (-2.8 to 0.84)			-0.30 (-1.2 to 0.57)		
H3000's	0.34 (-0.35 to 1.0)			-0.89 (-2.6 to 0.86)			-0.70 (-1.5 to 0.14)		
mean_StanceDur * group_char		0.78	0.78		0.002	0.004		0.34	0.45
mean_StanceDur * H2000's	-0.03 (-0.28 to 0.21)			-0.07 (-0.62 to 0.49)			-0.03 (-0.35 to 0.30)		
mean_StanceDur * H3000's	0.07 (-0.18 to 0.32)			0.98 (0.41 to 1.5)			0.24 (-0.10 to 0.57)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.58 (NA to NA)			0.34 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	11						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.04 to 0.97)	0.034	0.14	3.3 (2.1 to 4.5)	< 0.001	< 0.001	1.7 (1.1 to 2.3)	< 0.001	< 0.001
mean_GaitCycleDur	-0.01 (-0.11 to 0.08)	0.78	0.89	0.05 (-0.16 to 0.26)	0.65	0.65	0.04 (-0.09 to 0.17)	0.52	0.52
group_char		0.41	0.82		0.41	0.54		0.21	0.33
H1000's	_			_			_		
H2000's	-0.17 (-0.91 to 0.57)			-0.96 (-2.8 to 0.91)			-0.30 (-1.2 to 0.61)		
H3000's	0.34 (-0.37 to 1.1)			-1.1 (-2.9 to 0.67)			-0.79 (-1.7 to 0.08)		
mean_GaitCycleDur * group_char		0.89	0.89		0.002	0.004		0.25	0.33
mean_GaitCycleDur * H2000's	-0.02 (-0.23 to 0.19)			-0.05 (-0.52 to 0.42)			-0.02 (-0.30 to 0.26)		
mean_GaitCycleDur * H3000's	0.04 (-0.17 to 0.26)			0.83 (0.35 to 1.3)			0.23 (-0.05 to 0.51)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.3 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.58 (NA to NA)			0.34 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	11						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (-0.02 to 0.88)	0.064	0.25	3.4 (2.2 to 4.6)	< 0.001	< 0.001	1.8 (1.3 to 2.4)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.21 (-0.35 to 0.78)	0.46	0.61	0.06 (-1.2 to 1.3)	0.93	0.93	-0.26 (-0.99 to 0.47)	0.48	0.65
group_char		0.13	0.26		0.16	0.21		0.74	0.74
H1000's	_			_			_		
H2000's	-0.23 (-0.93 to 0.46)			-1.0 (-2.8 to 0.77)			-0.33 (-1.2 to 0.51)		
H3000's	0.48 (-0.19 to 1.1)			0.79 (-0.93 to 2.5)			-0.18 (-0.99 to 0.62)		
mean_PeakUpDownVel_mean * group_char		0.62	0.62		0.003	0.005		0.064	0.13
mean_PeakUpDownVel_mean * H2000's	0.12 (-0.72 to 0.96)			-0.16 (-2.1 to 1.7)			-0.03 (-1.1 to 1.1)		
mean_PeakUpDownVel_mean * H3000's	-0.29 (-1.1 to 0.52)			-2.9 (-4.8 to -1.1)			-1.1 (-2.2 to -0.08)		
subj_char.sd(Intercept)	0.90 (NA to NA)			2.4 (NA to NA)			1.1 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.58 (NA to NA)			0.33 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	12						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.32 (-0.10 to 0.74)	0.14	0.21	1.4 (0.32 to 2.5)	0.011	0.043	0.80 (0.29 to 1.3)	0.002	0.007
mean_APexc_COV	0.02 (0.00 to 0.03)	0.090	0.21	0.01 (-0.02 to 0.05)	0.37	0.49	0.01 (-0.01 to 0.02)	0.44	0.48
group_char		0.27	0.27		0.069	0.14		0.48	0.48
H1000's	_			_			_		
H2000's	0.61 (-0.13 to 1.4)			1.9 (0.07 to 3.7)			0.26 (-0.58 to 1.1)		
H3000's	0.21 (-0.40 to 0.82)			1.5 (-0.09 to 3.0)			-0.26 (-0.98 to 0.47)		
mean_APexc_COV * group_char		0.16	0.21		0.83	0.83		0.40	0.48
mean_APexc_COV * H2000's	-0.03 (-0.06 to 0.00)			-0.01 (-0.07 to 0.04)			-0.01 (-0.04 to 0.01)		
mean_APexc_COV * H3000's	-0.01 (-0.03 to 0.01)			-0.01 (-0.05 to 0.03)			0.00 (-0.02 to 0.02)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.0 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.27 (NA to NA)			0.48 (NA to NA)			0.21 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_APexc_mean	for Cluster:	12						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.46 (0.08 to 0.84)	0.017	0.067	1.3 (0.26 to 2.3)	0.014	0.056	0.75 (0.28 to 1.2)	0.002	0.008
mean_APexc_mean	2.0 (-2.3 to 6.2)	0.36	0.57	7.1 (-0.05 to 14)	0.052	0.078	2.5 (-0.76 to 5.7)	0.13	0.27
group_char		0.57	0.57		0.090	0.090		0.71	0.91
H1000's	_			_			_		
H2000's	0.34 (-0.29 to 0.96)			1.1 (-0.52 to 2.7)			-0.01 (-0.78 to 0.76)		
H3000's	0.12 (-0.41 to 0.66)			1.6 (0.14 to 3.0)			-0.26 (-0.95 to 0.42)		
mean_APexc_mean * group_char		0.50	0.57		0.059	0.078		0.91	0.91
mean_APexc_mean * H2000's	-5.2 (-14 to 3.6)			15 (0.12 to 30)			0.54 (-6.2 to 7.3)		
mean_APexc_mean * H3000's	-1.8 (-8.4 to 4.7)			-3.8 (-15 to 7.4)			1.1 (-4.0 to 6.2)		
subj_char.sd(Intercept)	0.63 (NA to NA)			1.9 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.27 (NA to NA)			0.46 (NA to NA)			0.21 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval

 $<sup>^{2}</sup>$  False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	12						
	EEG	Theta	,	EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.71 (0.28 to 1.1)	0.001	0.005	2.1 (0.98 to 3.2)	< 0.001	< 0.001	1.0 (0.54 to 1.5)	< 0.001	< 0.001
mean_MLexc_COV	-0.01 (-0.03 to 0.01)	0.37	0.49	-0.03 (-0.07 to 0.01)	0.12	0.25	-0.01 (-0.03 to 0.01)	0.20	0.41
group_char		0.55	0.55		0.28	0.36		0.72	0.72
H1000's	_			_			_		
H2000's	-0.32 (-0.96 to 0.31)			1.1 (-0.57 to 2.8)			-0.16 (-0.94 to 0.62)		
H3000's	-0.03 (-0.61 to 0.54)			1.1 (-0.41 to 2.6)			-0.29 (-1.0 to 0.42)		
mean_MLexc_COV * group_char		0.072	0.14		0.36	0.36		0.70	0.72
mean_MLexc_COV * H2000's	0.03 (0.00 to 0.06)			0.04 (-0.02 to 0.09)			0.01 (-0.01 to 0.03)		
mean_MLexc_COV * H3000's	0.00 (-0.02 to 0.03)			0.02 (-0.03 to 0.06)			0.00 (-0.02 to 0.02)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.0 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.27 (NA to NA)			0.47 (NA to NA)			0.21 (NA to NA)		
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_MLexc_mean	for Cluster:	12						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.44 (0.06 to 0.82)	0.022	0.087	1.2 (0.17 to 2.2)	0.022	0.047	0.69 (0.21 to 1.2)	0.005	0.020
mean_MLexc_mean	1.6 (-1.2 to 4.3)	0.26	0.29	5.5 (0.74 to 10)	0.024	0.047	2.4 (0.35 to 4.5)	0.022	0.045
group_char		0.29	0.29		0.044	0.059		0.59	0.59
H1000's	_			_			_		
H2000's	0.44 (-0.13 to 1.0)			1.8 (0.18 to 3.4)			0.12 (-0.64 to 0.87)		
H3000's	0.08 (-0.45 to 0.61)			1.5 (0.08 to 3.0)			-0.26 (-0.94 to 0.43)		
mean_MLexc_mean * group_char		0.052	0.10		0.68	0.68		0.34	0.45
mean_MLexc_mean * H2000's	-4.0 (-7.6 to -0.42)			-1.9 (-8.2 to 4.5)			-1.7 (-4.4 to 1.0)		
mean_MLexc_mean * H3000's	-0.78 (-4.3 to 2.7)			-2.8 (-8.9 to 3.4)			-0.09 (-2.8 to 2.6)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.0 (NA to NA)			0.94 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.46 (NA to NA)			0.20 (NA to NA)		
	( )			( )		l	( )		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	12						
	EEG	Theta	,	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.15 to 0.86)	0.006	0.023	1.3 (0.28 to 2.3)	0.012	0.044	0.79 (0.33 to 1.3)	< 0.001	0.004
mean_StepDur	0.07 (-0.14 to 0.28)	0.52	0.52	0.41 (0.06 to 0.77)	0.022	0.044	0.10 (-0.05 to 0.26)	0.20	0.27
group_char		0.52	0.52		0.13	0.17		0.30	0.30
H1000's	_			_			_		
H2000's	0.35 (-0.25 to 0.96)			1.4 (-0.23 to 3.0)			0.02 (-0.74 to 0.78)		
H3000's	0.08 (-0.48 to 0.64)			1.3 (-0.19 to 2.7)			-0.49 (-1.2 to 0.20)		
mean_StepDur * group_char		0.38	0.52		0.51	0.51		0.089	0.18
mean_StepDur * H2000's	-0.33 (-0.79 to 0.13)			0.45 (-0.33 to 1.2)			-0.02 (-0.37 to 0.32)		
mean_StepDur * H3000's	-0.06 (-0.53 to 0.41)			0.20 (-0.59 to 1.0)			0.38 (0.03 to 0.74)		
subj_char.sd(Intercept)	0.63 (NA to NA)			1.9 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.27 (NA to NA)			0.46 (NA to NA)			0.20 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval

 $<sup>^{2}</sup>$  False discovery rate correction for multiple testing

Changes in	mean UDexc COV	for Cluster:	12						
		Theta	1.2	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.49 (0.15 to 0.84)	0.005	0.018	1.4 (0.38 to 2.3)	0.007	0.026	0.79 (0.32 to 1.2)	< 0.001	0.004
mean_UDexc_COV	0.01 (-0.01 to 0.02)	0.34	0.35	0.02 (0.00 to 0.04)	0.043	0.086	0.01 (0.00 to 0.02)	0.089	0.12
group_char		0.35	0.35		0.070	0.094		0.41	0.41
H1000's	_			_			_		
H2000's	0.39 (-0.16 to 0.94)			1.7 (0.09 to 3.2)			0.14 (-0.60 to 0.88)		
H3000's	0.06 (-0.45 to 0.56)			1.3 (-0.11 to 2.7)			-0.34 (-1.0 to 0.33)		
mean_UDexc_COV * group_char		0.064	0.13		>0.99	>0.99		0.067	0.12
mean_UDexc_COV * H2000's	-0.02 (-0.04 to 0.00)			0.00 (-0.04 to 0.03)			-0.01 (-0.03 to 0.00)		
mean_UDexc_COV * H3000's	0.00 (-0.02 to 0.02)			0.00 (-0.03 to 0.03)			0.01 (-0.01 to 0.02)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.0 (NA to NA)			0.94 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.46 (NA to NA)			0.20 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	12						
	EEG	Theta	,	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.66 (0.30 to 1.0)	< 0.001	0.002	1.9 (0.94 to 2.9)	< 0.001	< 0.001	1.1 (0.60 to 1.5)	< 0.001	< 0.001
mean_UDexc_mean	-4.0 (-13 to 4.6)	0.36	0.48	-13 (-29 to 2.2)	0.092	0.16	-8.3 (-15 to -1.7)	0.013	0.018
group_char		0.67	0.67		0.12	0.16		0.66	0.66
H1000's	_			_			_		
H2000's	-0.25 (-0.82 to 0.31)			1.5 (-0.08 to 3.1)			-0.31 (-1.1 to 0.44)		
H3000's	-0.07 (-0.59 to 0.44)			1.2 (-0.24 to 2.6)			-0.25 (-0.92 to 0.42)		
mean_UDexc_mean * group_char		0.045	0.090		0.75	0.75		0.009	0.018
mean_UDexc_mean * H2000's	15 (2.6 to 27)			7.0 (-15 to 29)			12 (3.3 to 22)		
mean_UDexc_mean * H3000's	4.2 (-6.9 to 15)			7.0 (-13 to 27)			1.1 (-7.3 to 9.6)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.0 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.47 (NA to NA)			0.20 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	12						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.17 to 0.85)	0.003	0.014	1.3 (0.37 to 2.3)	0.007	0.027	0.81 (0.35 to 1.3)	< 0.001	0.002
mean_StanceDur	0.05 (-0.08 to 0.17)	0.47	0.58	0.24 (0.03 to 0.45)	0.026	0.051	0.06 (-0.03 to 0.16)	0.19	0.26
group_char		0.58	0.58		0.11	0.14		0.34	0.34
H1000's	_			_			_		
H2000's	0.30 (-0.26 to 0.86)			1.4 (-0.13 to 3.0)			0.03 (-0.71 to 0.77)		
H3000's	0.08 (-0.44 to 0.60)			1.3 (-0.13 to 2.7)			-0.45 (-1.1 to 0.23)		
mean_StanceDur * group_char		0.38	0.58		0.51	0.51		0.068	0.14
mean_StanceDur * H2000's	-0.19 (-0.46 to 0.08)			0.27 (-0.20 to 0.73)			-0.03 (-0.24 to 0.17)		
mean_StanceDur * H3000's	-0.05 (-0.32 to 0.23)			0.12 (-0.35 to 0.59)			0.23 (0.02 to 0.44)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.0 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.27 (NA to NA)			0.46 (NA to NA)			0.20 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	12						
-	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.15 to 0.86)	0.006	0.023	1.3 (0.28 to 2.3)	0.012	0.044	0.79 (0.33 to 1.3)	< 0.001	0.004
mean_GaitCycleDur	0.03 (-0.07 to 0.14)	0.52	0.52	0.21 (0.03 to 0.38)	0.022	0.044	0.05 (-0.03 to 0.13)	0.20	0.27
group_char		0.52	0.52		0.13	0.17		0.30	0.30
H1000's	_			_			_		
H2000's	0.35 (-0.25 to 0.95)			1.4 (-0.23 to 3.0)			0.02 (-0.74 to 0.78)		
H3000's	0.08 (-0.48 to 0.64)			1.3 (-0.18 to 2.7)			-0.49 (-1.2 to 0.20)		
mean_GaitCycleDur * group_char		0.38	0.52		0.51	0.51		0.092	0.18
mean_GaitCycleDur * H2000's	-0.16 (-0.39 to 0.07)			0.22 (-0.17 to 0.61)			-0.01 (-0.18 to 0.16)		
mean_GaitCycleDur * H3000's	-0.03 (-0.26 to 0.20)			0.10 (-0.30 to 0.50)			0.19 (0.01 to 0.37)		
subj_char.sd(Intercept)	0.63 (NA to NA)			1.9 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.27 (NA to NA)			0.46 (NA to NA)			0.20 (NA to NA)		
subj_char.sd(Intercept)	0.63 (NA to NA)			1.9 (NA to NA)			0.93 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	12						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.65 (0.31 to 0.99)	< 0.001	< 0.001	1.9 (0.90 to 2.8)	< 0.001	< 0.001	1.0 (0.54 to 1.5)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	-0.36 (-0.96 to 0.24)	0.24	0.32	-1.0 (-2.1 to 0.07)	0.066	0.10	-0.49 (-0.95 to -0.03)	0.037	0.065
group_char		0.77	0.77		0.074	0.10		0.81	0.81
H1000's	_			_			_		
H2000's	-0.19 (-0.73 to 0.34)			1.6 (0.09 to 3.2)			-0.18 (-0.91 to 0.55)		
H3000's	-0.07 (-0.55 to 0.41)			1.2 (-0.15 to 2.6)			-0.20 (-0.86 to 0.46)		
mean_PeakUpDownVel_mean * group_char		0.030	0.061		0.80	0.80		0.048	0.065
mean_PeakUpDownVel_mean * H2000's	1.2 (0.29 to 2.0)			0.18 (-1.4 to 1.7)			0.67 (0.00 to 1.3)		
mean_PeakUpDownVel_mean * H3000's	0.39 (-0.40 to 1.2)			0.48 (-0.95 to 1.9)			-0.08 (-0.69 to 0.54)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.0 (NA to NA)			0.93 (NA to NA)		
Residual.sdObservation	0.26 (NA to NA)			0.47 (NA to NA)			0.20 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	13						
	EEG	Theta	,	EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.41 (-0.06 to 0.88)	0.087	0.35	2.6 (1.4 to 3.8)	< 0.001	< 0.001	1.2 (0.68 to 1.8)	< 0.001	< 0.001
mean_APexc_COV	-0.01 (-0.04 to 0.01)	0.33	0.52	0.00 (-0.05 to 0.04)	0.83	0.83	0.00 (-0.02 to 0.02)	0.82	0.82
group_char		0.52	0.52		0.14	0.18		0.066	0.088
H1000's	_			_			_		
H2000's	-0.02 (-0.91 to 0.86)			-2.3 (-4.7 to 0.04)			-1.2 (-2.3 to -0.16)		
H3000's	0.40 (-0.35 to 1.1)			-1.1 (-3.0 to 0.83)			-0.61 (-1.5 to 0.29)		
mean_APexc_COV * group_char		0.44	0.52		0.091	0.18		< 0.001	0.001
mean_APexc_COV * H2000's	0.02 (-0.01 to 0.06)			0.07 (0.00 to 0.13)			0.06 (0.02 to 0.09)		
mean_APexc_COV * H3000's	0.01 (-0.02 to 0.04)			0.01 (-0.05 to 0.07)			0.00 (-0.03 to 0.03)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.3 (NA to NA)			1.0 (NA to NA)		
Residual.sdObservation	0.32 (NA to NA)			0.59 (NA to NA)			0.30 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_APexc_mean	for Cluster:	13						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.51 (0.13 to 0.88)	0.008	0.034	2.4 (1.3 to 3.5)	< 0.001	< 0.001	1.1 (0.61 to 1.6)	< 0.001	< 0.001
mean_APexc_mean	-5.3 (-10 to -0.45)	0.032	0.064	2.7 (-6.6 to 12)	0.57	0.57	1.6 (-3.4 to 6.6)	0.53	0.71
group_char		0.52	0.55		0.32	0.57		0.25	0.50
H1000's	_			_			_		
H2000's	0.12 (-0.59 to 0.84)			-0.97 (-3.1 to 1.2)			0.07 (-0.90 to 1.0)		
H3000's	0.34 (-0.24 to 0.93)			-1.3 (-3.0 to 0.47)			-0.61 (-1.4 to 0.17)		
mean_APexc_mean * group_char		0.55	0.55		0.50	0.57		0.96	0.96
mean_APexc_mean * H2000's	5.1 (-4.3 to 15)			3.0 (-15 to 21)			-1.1 (-11 to 8.7)		
mean_APexc_mean * H3000's	0.54 (-8.5 to 9.6)			11 (-7.0 to 28)			0.63 (-8.9 to 10)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.60 (NA to NA)			0.32 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	13						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.13 (-0.26 to 0.51)	0.52	0.52	2.4 (1.3 to 3.5)	< 0.001	< 0.001	1.2 (0.67 to 1.7)	< 0.001	< 0.001
mean_MLexc_COV	0.01 (-0.01 to 0.02)	0.50	0.52	0.01 (-0.03 to 0.04)	0.60	0.81	0.00 (-0.02 to 0.02)	0.89	0.89
group_char		0.40	0.52		0.86	0.86		0.78	0.89
H1000's	_			_			_		
H2000's	0.56 (-0.27 to 1.4)			-0.63 (-2.9 to 1.6)			-0.19 (-1.2 to 0.85)		
H3000's	0.19 (-0.43 to 0.82)			-0.21 (-2.0 to 1.5)			-0.28 (-1.1 to 0.52)		
mean_MLexc_COV * group_char		0.35	0.52		0.30	0.60		0.21	0.42
mean_MLexc_COV * H2000's	-0.01 (-0.05 to 0.03)			-0.01 (-0.09 to 0.07)			0.01 (-0.03 to 0.06)		
mean_MLexc_COV * H3000's	0.02 (-0.01 to 0.05)			-0.05 (-0.11 to 0.01)			-0.02 (-0.05 to 0.01)		
subj_char.sd(Intercept)	0.64 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.60 (NA to NA)			0.32 (NA to NA)		
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CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_MLexc_mean	for Cluster:	13						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.48 (0.12 to 0.85)	0.009	0.035	2.4 (1.4 to 3.5)	< 0.001	< 0.001	1.1 (0.65 to 1.6)	< 0.001	< 0.001
mean_MLexc_mean	-3.3 (-6.3 to -0.37)	0.027	0.054	1.6 (-4.1 to 7.3)	0.59	0.59	0.76 (-2.4 to 3.9)	0.63	0.84
group_char		0.23	0.23		0.23	0.45		0.15	0.30
H1000's	_			_			_		
H2000's	0.08 (-0.60 to 0.77)			-1.1 (-3.2 to 0.96)			-0.08 (-1.0 to 0.85)		
H3000's	0.47 (-0.08 to 1.0)			-1.4 (-3.0 to 0.28)			-0.71 (-1.5 to 0.03)		
mean_MLexc_mean * group_char		0.16	0.22		0.36	0.48		0.85	0.85
mean_MLexc_mean * H2000's	4.0 (-0.68 to 8.6)			2.8 (-6.1 to 12)			0.88 (-4.0 to 5.8)		
mean_MLexc_mean * H3000's	-0.01 (-4.0 to 3.9)			5.6 (-2.1 to 13)			1.2 (-3.0 to 5.4)		
subj_char.sd(Intercept)	0.64 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.59 (NA to NA)			0.32 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean StepDur	for Cluster:	13						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.10 to 0.76)	0.012	0.046	2.4 (1.4 to 3.4)	< 0.001	< 0.001	1.1 (0.68 to 1.6)	< 0.001	< 0.001
mean_StepDur	-0.23 (-0.45 to -0.02)	0.033	0.066	0.19 (-0.22 to 0.59)	0.37	0.37	0.06 (-0.16 to 0.28)	0.60	0.62
group_char		0.074	0.10		0.15	0.20		0.15	0.30
H1000's	_			_			_		
H2000's	0.16 (-0.56 to 0.87)			-1.1 (-3.2 to 1.0)			-0.11 (-1.1 to 0.85)		
H3000's	0.69 (0.10 to 1.3)			-1.7 (-3.4 to 0.06)			-0.77 (-1.6 to 0.01)		
mean_StepDur * group_char		0.16	0.16		0.085	0.17		0.62	0.62
mean_StepDur * H2000's	0.28 (-0.29 to 0.86)			0.38 (-0.72 to 1.5)			0.16 (-0.44 to 0.77)		
mean_StepDur * H3000's	-0.45 (-1.0 to 0.13)			1.2 (0.13 to 2.3)			0.27 (-0.34 to 0.88)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.59 (NA to NA)			0.32 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	13						
-	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.12 to 0.74)	0.007	0.019	2.6 (1.5 to 3.6)	< 0.001	< 0.001	1.2 (0.73 to 1.6)	< 0.001	< 0.001
mean_UDexc_COV	-0.02 (-0.03 to 0.00)	0.010	0.019	0.00 (-0.02 to 0.02)	0.98	0.98	0.00 (-0.01 to 0.01)	0.82	0.82
group_char		0.036	0.048		0.19	0.26		0.13	0.27
H1000's	_			_			_		
H2000's	0.26 (-0.37 to 0.89)			-1.2 (-3.3 to 0.86)			-0.13 (-1.0 to 0.78)		
H3000's	0.68 (0.16 to 1.2)			-1.4 (-3.1 to 0.23)			-0.73 (-1.5 to -0.01)		
mean_UDexc_COV * group_char		0.11	0.11		0.17	0.26		0.64	0.82
mean_UDexc_COV * H2000's	0.01 (-0.01 to 0.03)			0.02 (-0.02 to 0.07)			0.01 (-0.01 to 0.03)		
mean_UDexc_COV * H3000's	-0.01 (-0.03 to 0.01)			0.04 (0.00 to 0.08)			0.01 (-0.01 to 0.03)		
subj_char.sd(Intercept)	0.62 (NA to NA)			2.3 (NA to NA)			0.98 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.59 (NA to NA)			0.32 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	13						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.00 (-0.33 to 0.34)	>0.99	>0.99	2.5 (1.5 to 3.5)	< 0.001	< 0.001	1.2 (0.76 to 1.7)	< 0.001	< 0.001
mean_UDexc_mean	9.3 (1.2 to 17)	0.024	0.095	1.9 (-14 to 18)	0.81	0.91	-0.92 (-9.5 to 7.7)	0.83	0.83
group_char		0.20	0.26		0.91	0.91		0.54	0.72
H1000's	_			_			_		
H2000's	0.62 (-0.06 to 1.3)			-0.39 (-2.5 to 1.7)			0.14 (-0.79 to 1.1)		
H3000's	0.23 (-0.30 to 0.75)			-0.30 (-1.9 to 1.3)			-0.34 (-1.1 to 0.39)		
mean_UDexc_mean * group_char		0.093	0.19		0.13	0.26		0.26	0.53
mean_UDexc_mean * H2000's	-9.2 (-26 to 7.3)			-19 (-52 to 14)			-5.7 (-23 to 12)		
mean_UDexc_mean * H3000's	8.8 (-3.3 to 21)			-24 (-48 to 0.09)			-11 (-24 to 2.2)		
subj_char.sd(Intercept)	0.64 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.30 (NA to NA)			0.59 (NA to NA)			0.32 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval

 $<sup>^2</sup>$  False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	13						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.39 (0.08 to 0.70)	0.015	0.058	2.4 (1.4 to 3.4)	< 0.001	< 0.001	1.1 (0.70 to 1.6)	< 0.001	< 0.001
mean_StanceDur	-0.14 (-0.27 to -0.01)	0.033	0.066	0.12 (-0.13 to 0.36)	0.34	0.34	0.04 (-0.10 to 0.17)	0.58	0.69
group_char		0.062	0.083		0.19	0.26		0.15	0.31
H1000's	_			_			_		
H2000's	0.18 (-0.47 to 0.84)			-1.0 (-3.1 to 1.0)			-0.09 (-1.0 to 0.83)		
H3000's	0.65 (0.11 to 1.2)			-1.5 (-3.1 to 0.18)			-0.71 (-1.5 to 0.02)		
mean_StanceDur * group_char		0.10	0.10		0.10	0.19		0.69	0.69
mean_StanceDur * H2000's	0.19 (-0.14 to 0.51)			0.19 (-0.42 to 0.81)			0.09 (-0.25 to 0.43)		
mean_StanceDur * H3000's	-0.27 (-0.59 to 0.06)			0.69 (0.06 to 1.3)			0.13 (-0.21 to 0.48)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.59 (NA to NA)			0.32 (NA to NA)		
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CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_GaitCycleDur	for Cluster:	13						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.10 to 0.76)	0.012	0.046	2.4 (1.4 to 3.4)	< 0.001	< 0.001	1.1 (0.68 to 1.6)	< 0.001	< 0.001
mean_GaitCycleDur	-0.12 (-0.22 to -0.01)	0.033	0.066	0.09 (-0.11 to 0.30)	0.37	0.37	0.03 (-0.08 to 0.14)	0.60	0.62
group_char		0.075	0.10		0.15	0.19		0.15	0.30
H1000's	_			_			_		
H2000's	0.16 (-0.56 to 0.87)			-1.1 (-3.2 to 1.0)			-0.11 (-1.1 to 0.85)		
H3000's	0.69 (0.09 to 1.3)			-1.7 (-3.4 to 0.06)			-0.77 (-1.6 to 0.01)		
mean_GaitCycleDur * group_char		0.16	0.16		0.085	0.17		0.62	0.62
mean_GaitCycleDur * H2000's	0.14 (-0.15 to 0.43)			0.19 (-0.36 to 0.74)			0.08 (-0.22 to 0.38)		
mean_GaitCycleDur * H3000's	-0.22 (-0.51 to 0.07)			0.62 (0.06 to 1.2)			0.14 (-0.17 to 0.44)		
subj_char.sd(Intercept)	0.63 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.31 (NA to NA)			0.59 (NA to NA)			0.32 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	13						
	EEG The	ta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.03 (-0.28 to 0.34)	0.84	0.84	2.6 (1.6 to 3.6)	< 0.001	< 0.001	1.2 (0.78 to 1.7)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.80 (0.20 to 1.4)	0.009	0.035	-0.09 (-1.3 to 1.1)	0.89	0.89	-0.09 (-0.74 to 0.56)	0.78	0.78
group_char		0.16	0.21		0.79	0.89		0.43	0.57
H1000's	_			_			_		
H2000's	0.59 (-0.03 to 1.2)			-0.55 (-2.6 to 1.5)			0.11 (-0.78 to 1.0)		
H3000's	0.24 (-0.25 to 0.74)			-0.47 (-2.1 to 1.1)			-0.41 (-1.1 to 0.29)		
mean_PeakUpDownVel_mean * group_char		0.057	0.11		0.24	0.47		0.37	0.57
mean_PeakUpDownVel_mean * H2000's	-0.81 (-2.0 to 0.34)			-1.2 (-3.5 to 1.1)			-0.41 (-1.7 to 0.84)		
mean_PeakUpDownVel_mean * H3000's	0.60 (-0.28 to 1.5)			-1.5 (-3.3 to 0.30)			-0.69 (-1.6 to 0.27)		
subj_char.sd(Intercept)	0.64 (NA to NA)			2.3 (NA to NA)			0.97 (NA to NA)		
Residual.sdObservation	0.29 (NA to NA)			0.59 (NA to NA)			0.32 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean_APexc_COV	for Cluster:	14						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.41 (0.05 to 0.78)	0.027	0.11	4.3 (3.2 to 5.3)	< 0.001	< 0.001	2.6 (2.0 to 3.2)	< 0.001	< 0.001
mean_APexc_COV	0.00 (-0.01 to 0.01)	0.51	0.51	0.00 (-0.03 to 0.03)	0.92	0.95	0.00 (-0.02 to 0.02)	0.82	0.82
group_char		0.33	0.51		0.57	0.95		0.70	0.82
H1000's	_			_			_		
H2000's	-0.26 (-0.84 to 0.33)			-0.80 (-2.5 to 0.88)			-0.05 (-0.98 to 0.88)		
H3000's	0.21 (-0.35 to 0.77)			-0.70 (-2.3 to 0.90)			-0.36 (-1.2 to 0.52)		
mean_APexc_COV * group_char		0.40	0.51		0.95	0.95		0.044	0.087
mean_APexc_COV * H2000's	0.00 (-0.01 to 0.02)			0.00 (-0.05 to 0.04)			-0.01 (-0.03 to 0.02)		
mean_APexc_COV * H3000's	-0.01 (-0.02 to 0.01)			0.00 (-0.04 to 0.04)			0.02 (0.00 to 0.04)		
subj_char.sd(Intercept)	0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.19 (NA to NA)			0.56 (NA to NA)			0.31 (NA to NA)		
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 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

mean_APexc_mean	for Cluster:	14						
EEG	Theta		EEG	Alpha		EEG	Beta	
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
0.52 (0.17 to 0.87)	0.004	0.016	4.1 (3.1 to 5.1)	< 0.001	< 0.001	2.6 (2.0 to 3.1)	< 0.001	< 0.001
-0.79 (-3.3 to 1.7)	0.54	0.73	2.6 (-4.7 to 9.9)	0.49	0.49	1.6 (-2.6 to 5.8)	0.45	0.56
	0.54	0.73		0.21	0.28		0.56	0.56
_			_			_		
-0.20 (-0.75 to 0.34)			-1.4 (-3.0 to 0.16)			-0.45 (-1.3 to 0.43)		
0.12 (-0.41 to 0.64)			-0.53 (-2.0 to 0.98)			-0.03 (-0.87 to 0.81)		
	0.83	0.83		0.090	0.18		0.29	0.56
-0.08 (-4.4 to 4.2)			12 (-0.48 to 24)			5.2 (-1.9 to 12)		
-1.2 (-5.3 to 2.9)			-2.3 (-14 to 9.7)			3.9 (-3.0 to 11)		
0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
0.19 (NA to NA)			0.54 (NA to NA)			0.31 (NA to NA)		
	EEG Beta (95% CI) 0.52 (0.17 to 0.87) -0.79 (-3.3 to 1.7) -0.20 (-0.75 to 0.34) 0.12 (-0.41 to 0.64) -0.08 (-4.4 to 4.2) -1.2 (-5.3 to 2.9) 0.84 (NA to NA)	EEG Theta  Beta (95% CI) p-value  0.52 (0.17 to 0.87) 0.004  -0.79 (-3.3 to 1.7) 0.54  -0.20 (-0.75 to 0.34)  0.12 (-0.41 to 0.64)  -0.08 (-4.4 to 4.2) -1.2 (-5.3 to 2.9)  0.84 (NA to NA)	EEG Theta         q-value           0.52 (0.17 to 0.87)         0.004         0.016           -0.79 (-3.3 to 1.7)         0.54         0.73           0.54         0.73         0.73           -0.20 (-0.75 to 0.34)         0.12 (-0.41 to 0.64)           -0.08 (-4.4 to 4.2)         0.83         0.83           -1.2 (-5.3 to 2.9)         0.84 (NA to NA)         0.84 (NA to NA)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

 $<sup>^1</sup>$  CI = Confidence Interval  $^2$  False discovery rate correction for multiple testing

Changes in	mean_MLexc_COV	for Cluster:	14						
	EEG	Theta		EEG .	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.48 (0.13 to 0.84)	0.008	0.031	4.4 (3.4 to 5.4)	< 0.001	< 0.001	2.7 (2.2 to 3.3)	< 0.001	< 0.001
mean_MLexc_COV	0.00 (-0.01 to 0.01)	0.90	0.90	-0.01 (-0.04 to 0.02)	0.47	0.72	-0.01 (-0.02 to 0.01)	0.54	0.71
group_char		0.17	0.22		0.54	0.72		0.99	0.99
H1000's	_			_			_		
H2000's	-0.40 (-0.94 to 0.15)			-0.88 (-2.5 to 0.69)			-0.07 (-0.94 to 0.80)		
H3000's	0.14 (-0.39 to 0.67)			-0.44 (-2.0 to 1.1)			0.00 (-0.85 to 0.84)		
mean_MLexc_COV * group_char		0.032	0.065		0.73	0.73		0.31	0.61
mean_MLexc_COV * H2000's	0.01 (0.00 to 0.03)			0.00 (-0.05 to 0.04)			-0.01 (-0.04 to 0.01)		
mean_MLexc_COV * H3000's	0.00 (-0.02 to 0.01)			-0.02 (-0.06 to 0.03)			0.01 (-0.02 to 0.03)		
subj_char.sd(Intercept)	0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.18 (NA to NA)			0.55 (NA to NA)			0.32 (NA to NA)		
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CI = Confidence Interval
 False discovery rate correction for multiple testing

Changes in	mean MLexc mean	for Cluster:	14						
·	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.50 (0.15 to 0.84)	0.005	0.021	4.0 (3.0 to 5.0)	< 0.001	< 0.001	2.5 (1.9 to 3.0)	< 0.001	< 0.001
mean_MLexc_mean	-0.27 (-1.8 to 1.3)	0.73	0.73	3.1 (-1.5 to 7.7)	0.18	0.36	1.9 (-0.72 to 4.4)	0.16	0.31
group_char		0.72	0.73		0.41	0.52		0.72	0.87
H1000's	_			_			_		
H2000's	-0.09 (-0.62 to 0.44)			-1.0 (-2.6 to 0.50)			-0.31 (-1.2 to 0.55)		
H3000's	0.14 (-0.38 to 0.66)			-0.49 (-2.0 to 1.0)			0.02 (-0.81 to 0.85)		
mean_MLexc_mean * group_char		0.50	0.73		0.52	0.52		0.87	0.87
mean_MLexc_mean * H2000's	-1.2 (-3.2 to 0.80)			1.2 (-4.7 to 7.2)			0.72 (-2.7 to 4.1)		
mean_MLexc_mean * H3000's	-0.75 (-2.9 to 1.4)			-2.1 (-8.4 to 4.2)			0.89 (-2.7 to 4.4)		
subj_char.sd(Intercept)	0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.18 (NA to NA)			0.55 (NA to NA)			0.31 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StepDur	for Cluster:	14						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.54 (0.20 to 0.88)	0.002	0.008	4.1 (3.1 to 5.1)	< 0.001	< 0.001	2.5 (2.0 to 3.1)	< 0.001	< 0.001
mean_StepDur	-0.07 (-0.18 to 0.05)	0.24	0.48	0.16 (-0.17 to 0.50)	0.35	0.35	0.13 (-0.06 to 0.32)	0.19	0.37
group_char		0.56	0.59		0.22	0.31		0.60	0.60
H1000's	_			_			_		
H2000's	-0.16 (-0.70 to 0.38)			-1.3 (-2.8 to 0.28)			-0.40 (-1.3 to 0.46)		
H3000's	0.16 (-0.37 to 0.69)			-0.97 (-2.5 to 0.56)			0.01 (-0.83 to 0.86)		
mean_StepDur * group_char		0.59	0.59		0.23	0.31		0.42	0.56
mean_StepDur * H2000's	-0.06 (-0.30 to 0.17)			0.51 (-0.18 to 1.2)			0.25 (-0.15 to 0.65)		
mean_StepDur * H3000's	-0.14 (-0.42 to 0.14)			0.50 (-0.33 to 1.3)			0.17 (-0.31 to 0.64)		
subj_char.sd(Intercept)	0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.19 (NA to NA)			0.54 (NA to NA)			0.31 (NA to NA)		

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval

 $<sup>^{2}</sup>$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_COV	for Cluster:	14						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.50 (0.17 to 0.84)	0.003	0.014	4.2 (3.2 to 5.1)	< 0.001	< 0.001	2.6 (2.0 to 3.1)	< 0.001	< 0.001
mean_UDexc_COV	0.00 (-0.01 to 0.00)	0.55	0.76	0.01 (-0.02 to 0.03)	0.62	0.77	0.01 (-0.01 to 0.02)	0.27	0.53
group_char		0.57	0.76		0.34	0.69		0.81	0.81
H1000's	_			_			_		
H2000's	-0.18 (-0.70 to 0.35)			-1.1 (-2.6 to 0.44)			-0.28 (-1.1 to 0.55)		
H3000's	0.12 (-0.39 to 0.64)			-0.75 (-2.2 to 0.72)			-0.08 (-0.90 to 0.73)		
mean_UDexc_COV * group_char		0.87	0.87		0.77	0.77		0.41	0.54
mean_UDexc_COV * H2000's	0.00 (-0.01 to 0.01)			0.01 (-0.02 to 0.04)			0.00 (-0.01 to 0.02)		
mean_UDexc_COV * H3000's	0.00 (-0.01 to 0.01)			0.01 (-0.03 to 0.04)			0.01 (-0.01 to 0.03)		
subj_char.sd(Intercept)	0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.19 (NA to NA)			0.55 (NA to NA)			0.31 (NA to NA)		
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 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_UDexc_mean	for Cluster:	14						
	EEG	Theta		EEG	Alpha		EEG	Beta	
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.40 (0.06 to 0.74)	0.022	0.088	4.4 (3.4 to 5.4)	< 0.001	< 0.001	2.7 (2.2 to 3.3)	< 0.001	< 0.001
mean_UDexc_mean	3.1 (-1.4 to 7.6)	0.17	0.35	-6.4 (-20 to 7.0)	0.35	0.70	-3.4 (-11 to 4.2)	0.38	0.76
group_char		0.42	0.56		0.57	0.70		0.79	0.79
H1000's	_			_			_		
H2000's	-0.27 (-0.79 to 0.26)			-0.81 (-2.3 to 0.71)			-0.13 (-0.97 to 0.71)		
H3000's	0.10 (-0.42 to 0.61)			-0.46 (-1.9 to 1.0)			0.17 (-0.64 to 0.99)		
mean_UDexc_mean * group_char		0.57	0.57		0.70	0.70		0.75	0.79
mean_UDexc_mean * H2000's	2.8 (-3.9 to 9.4)			-3.9 (-24 to 16)			-4.1 (-15 to 7.2)		
mean_UDexc_mean * H3000's	-0.72 (-7.2 to 5.7)			-8.3 (-27 to 11)			-3.2 (-14 to 7.8)		
subj_char.sd(Intercept)	0.83 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.18 (NA to NA)			0.55 (NA to NA)			0.31 (NA to NA)		
1 07 0 01 7 1			•		•			•	•

<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

Changes in	mean_StanceDur	for Cluster:	14							
	EEG Theta			EEG Alpha			EEG Beta			
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	
(Intercept)	0.53 (0.20 to 0.86)	0.002	0.007	4.1 (3.1 to 5.1)	< 0.001	< 0.001	2.5 (2.0 to 3.1)	< 0.001	< 0.001	
mean_StanceDur	-0.05 (-0.11 to 0.02)	0.18	0.37	0.10 (-0.10 to 0.30)	0.31	0.31	0.08 (-0.03 to 0.20)	0.15	0.30	
group_char		0.53	0.61		0.27	0.31		0.64	0.64	
H1000's	_			_			_			
H2000's	-0.18 (-0.71 to 0.34)			-1.2 (-2.7 to 0.35)			-0.35 (-1.2 to 0.49)			
H3000's	0.14 (-0.38 to 0.66)			-0.87 (-2.3 to 0.62)			0.04 (-0.78 to 0.86)			
mean_StanceDur * group_char		0.61	0.61		0.30	0.31		0.49	0.64	
mean_StanceDur * H2000's	-0.03 (-0.16 to 0.11)			0.28 (-0.13 to 0.68)			0.13 (-0.10 to 0.37)			
mean_StanceDur * H3000's	-0.08 (-0.25 to 0.08)			0.26 (-0.22 to 0.74)			0.09 (-0.19 to 0.36)			
subj_char.sd(Intercept)	0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)			
Residual.sdObservation	0.18 (NA to NA)			0.55 (NA to NA)			0.31 (NA to NA)			
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<sup>&</sup>lt;sup>1</sup> CI = Confidence Interval <sup>2</sup> False discovery rate correction for multiple testing

EEC									
EEG Theta			EEG Alpha			EEG Beta			
Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	
0.54 (0.20 to 0.88)	0.002	0.008	4.1 (3.1 to 5.1)	< 0.001	< 0.001	2.5 (2.0 to 3.1)	< 0.001	< 0.001	
-0.03 (-0.09 to 0.02)	0.24	0.48	0.08 (-0.09 to 0.25)	0.35	0.35	0.06 (-0.03 to 0.16)	0.19	0.37	
	0.56	0.59		0.22	0.31		0.60	0.60	
_			_			_			
-0.16 (-0.70 to 0.38)			-1.3 (-2.8 to 0.28)			-0.40 (-1.3 to 0.46)			
0.16 (-0.37 to 0.69)			-0.97 (-2.5 to 0.56)			0.01 (-0.83 to 0.86)			
	0.59	0.59		0.23	0.31		0.42	0.56	
-0.03 (-0.15 to 0.09)			0.25 (-0.09 to 0.60)			0.12 (-0.07 to 0.32)			
-0.07 (-0.21 to 0.07)			0.25 (-0.16 to 0.67)			0.08 (-0.15 to 0.32)			
0.84 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)			
0.19 (NA to NA)			0.54 (NA to NA)			0.31 (NA to NA)			
-1	0.54 (0.20 to 0.88) 0.03 (-0.09 to 0.02) 	0.54 (0.20 to 0.88) 0.002 0.03 (-0.09 to 0.02) 0.24 0.56 0.16 (-0.70 to 0.38) 0.16 (-0.37 to 0.69) 0.59 0.03 (-0.15 to 0.09) 0.07 (-0.21 to 0.07) 0.84 (NA to NA)	0.54 (0.20 to 0.88)	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					

 $<sup>^{1}</sup>$  CI = Confidence Interval  $^{2}$  False discovery rate correction for multiple testing

Changes in	mean_PeakUpDownVel_mean	for Cluster:	14						
	EEG Theta			EEG Alpha			EEG Beta		
Characteristic	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value	Beta (95% CI)	p-value	q-value
(Intercept)	0.43 (0.10 to 0.77)	0.011	0.043	4.3 (3.4 to 5.3)	< 0.001	< 0.001	2.7 (2.2 to 3.2)	< 0.001	< 0.001
mean_PeakUpDownVel_mean	0.17 (-0.16 to 0.50)	0.31	0.60	-0.49 (-1.5 to 0.50)	0.33	0.66	-0.23 (-0.80 to 0.33)	0.42	0.74
group_char		0.47	0.60		0.59	0.69		0.80	0.80
H1000's	_			_			_		
H2000's	-0.26 (-0.78 to 0.25)			-0.74 (-2.2 to 0.75)			-0.11 (-0.93 to 0.71)		
H3000's	0.06 (-0.44 to 0.56)			-0.53 (-2.0 to 0.92)			0.18 (-0.61 to 0.98)		
mean_PeakUpDownVel_mean * group_char		0.60	0.60		0.69	0.69		0.55	0.74
mean_PeakUpDownVel_mean * H2000's	0.24 (-0.24 to 0.73)			-0.60 (-2.0 to 0.84)			-0.44 (-1.3 to 0.38)		
mean_PeakUpDownVel_mean * H3000's	0.06 (-0.43 to 0.54)			-0.46 (-1.9 to 0.98)			-0.31 (-1.1 to 0.52)		
subj_char.sd(Intercept)	0.83 (NA to NA)			2.4 (NA to NA)			1.3 (NA to NA)		
Residual.sdObservation	0.18 (NA to NA)			0.54 (NA to NA)			0.31 (NA to NA)		

CI = Confidence Interval
 False discovery rate correction for multiple testing