

Results

Mixed Model

Model Info

Info	
Estimate	Linear mixed model fit by REML
Call	error_m ~ 1 + feedback + variable + feedback:variable+(1 ppid)
AIC	-6138.301
BIC	-5952.175
LogLikel.	3035.775
R-squared Marginal	0.260
R-squared Conditional	0.508
Converged	yes
Optimizer	bobyqa

[3]

Model Results

Fixed Effect Omnibus tests

	F	Num df	Den df	p
feedback	1321.250	2	5013	< .001
variable	5.759	3	5013	< .001
feedback * variable	0.310	6	5013	0.932

Anmerkung. Satterthwaite method for degrees of freedom

Fixed Effects Parameter Estimates

Names	Effect	Estimate	SE	95% Confidence Interval		df	t	p
				Lower	Upper			
(Intercept)	(Intercept)	0.27542	0.01896	0.23825	0.31258	23.0	14.5239	< .001
feedback1	hand - cursor	0.11670	0.00445	0.10799	0.12542	5013.0	26.2473	< .001
feedback2	none - cursor	0.23184	0.00451	0.22300	0.24068	5013.1	51.3957	< .001
variable1	point_errD - point_err	0.01001	0.00518	-1.40e-4	0.02017	5013.0	1.9329	0.053
variable2	point_errL - point_err	-0.00596	0.00518	-0.01612	0.00419	5013.0	-1.1505	0.250
variable3	point_errR - point_err	0.01298	0.00518	0.00283	0.02314	5013.0	2.5058	0.012
feedback1 * variable1	hand - cursor * point_errD - point_err	-0.00155	0.01258	-0.02620	0.02310	5013.0	-0.1233	0.902
feedback2 * variable1	none - cursor * point_errD - point_err	-4.87e-4	0.01275	-0.02548	0.02451	5013.0	-0.0382	0.970
feedback1 * variable2	hand - cursor * point_errL - point_err	-0.01015	0.01258	-0.03480	0.01449	5013.0	-0.8074	0.419
feedback2 * variable2	none - cursor * point_errL - point_err	-0.00455	0.01276	-0.02955	0.02045	5013.0	-0.3566	0.721
feedback1 * variable3	hand - cursor * point_errR - point_err	0.00664	0.01258	-0.01801	0.03129	5013.0	0.5280	0.598
feedback2 * variable3	none - cursor * point_errR - point_err	0.00161	0.01276	-0.02339	0.02661	5013.0	0.1263	0.900

Random Components

Groups	Name	SD	Variance	ICC
ppid	(Intercept)	0.0925	0.00855	0.336
	Residual	0.1301	0.01692	

Anmerkung. Number of Obs: 5048 , groups: ppid 24

Post Hoc Tests

Post Hoc Comparisons - feedback

Comparison		Difference	SE	t	df	Pholm
feedback	feedback					
cursor	- hand	-0.117	0.00445	-26.2	5013	< .001
cursor	- none	-0.232	0.00451	-51.4	5013	< .001
hand	- none	-0.115	0.00451	-25.6	5013	< .001

Post Hoc Comparisons - variable

Comparison							
variable	variable	Difference	SE	t	df	Pholm	
point_err	- point_errD	-0.01001	0.00518	-1.933	5013	0.160	
point_err	- point_errL	0.00596	0.00518	1.151	5013	0.500	
point_err	- point_errR	-0.01298	0.00518	-2.506	5013	0.049	
point_errD	- point_errL	0.01597	0.00518	3.084	5013	0.010	
point_errD	- point_errR	-0.00297	0.00518	-0.573	5013	0.566	
point_errL	- point_errR	-0.01894	0.00518	-3.657	5013	0.002	

Estimated Marginal Means

feedback

feedback	Mean	SE	df	95% Confidence Interval	
				Lower	Upper
cursor	0.159	0.0191	23.8	0.120	0.199
hand	0.276	0.0191	23.8	0.236	0.315
none	0.391	0.0191	23.9	0.352	0.431

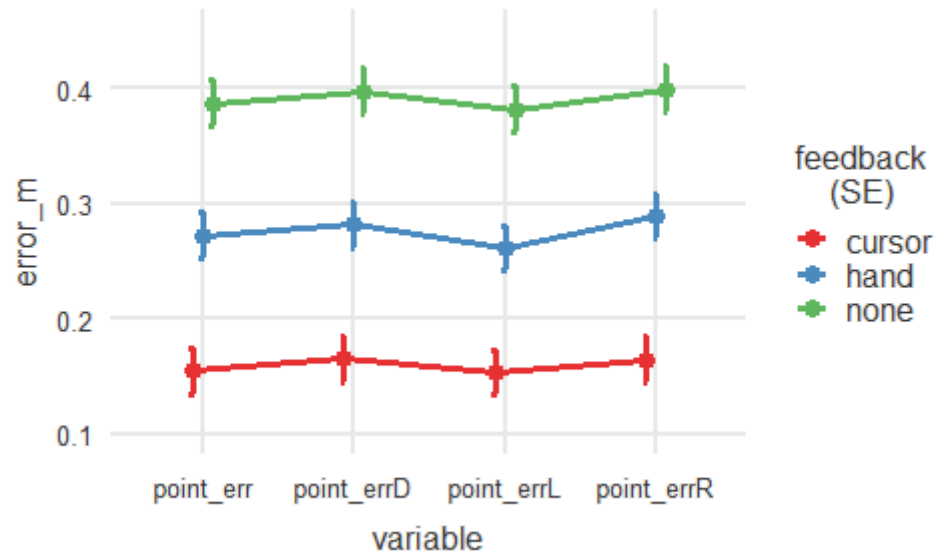
variable

variable	Mean	SE	df	95% Confidence Interval	
				Lower	Upper
point_err	0.271	0.0192	24.3	0.232	0.311
point_errD	0.281	0.0192	24.3	0.242	0.321
point_errL	0.265	0.0192	24.3	0.226	0.305
point_errR	0.284	0.0192	24.3	0.244	0.324

feedback:variable

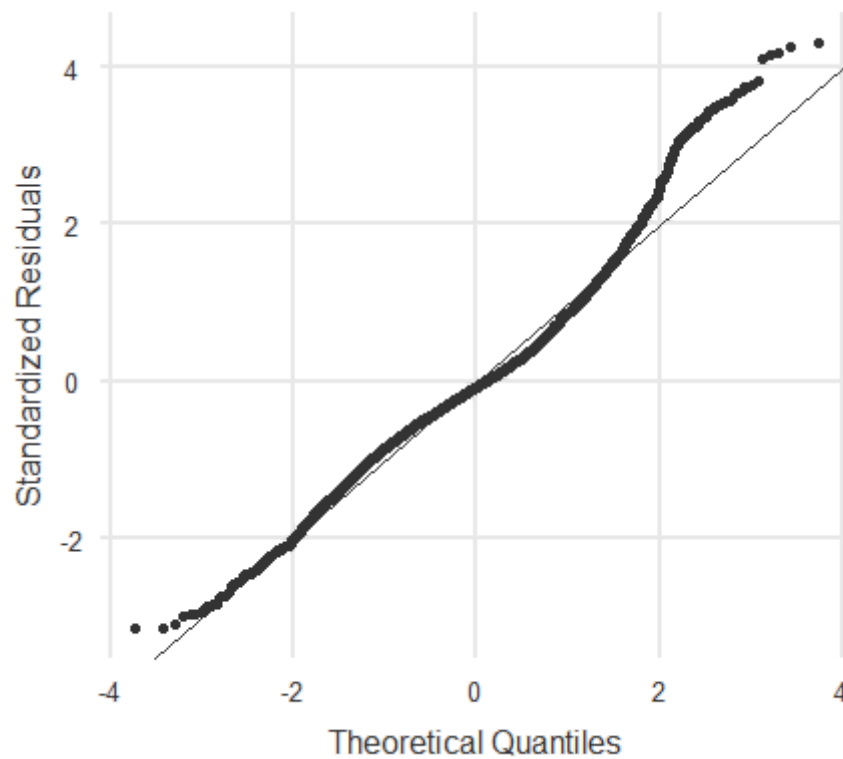
feedback	variable	Mean	SE	df	95% Confidence Interval	
					Lower	Upper
cursor	point_err	0.154	0.0199	27.9	0.114	0.195
hand	point_err	0.272	0.0199	27.8	0.231	0.313
none	point_err	0.387	0.0200	28.2	0.346	0.428
cursor	point_errD	0.165	0.0199	27.9	0.124	0.206
hand	point_errD	0.281	0.0199	27.8	0.241	0.322
none	point_errD	0.397	0.0199	28.1	0.356	0.438
cursor	point_errL	0.153	0.0199	27.9	0.112	0.194
hand	point_errL	0.261	0.0199	27.8	0.220	0.302
none	point_errL	0.381	0.0199	28.2	0.341	0.422
cursor	point_errR	0.165	0.0199	27.9	0.124	0.205
hand	point_errR	0.289	0.0199	27.8	0.248	0.330
none	point_errR	0.399	0.0199	28.2	0.358	0.440

Effects Plots



Assumption Checks

Q-Q Plot



Referenzen

- [1] The jamovi project (2023). *jamovi*. (Version 2.4) [Computer Software]. Retrieved from <https://www.jamovi.org>.
- [2] R Core Team (2022). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from <https://cran.r-project.org>. (R packages retrieved from CRAN snapshot 2023-04-07).
- [3] Gallucci, M. (2019). *GAMLj: General analyses for linear models*. [jamovi module]. Retrieved from <https://gamlj.github.io/>.