

Control Analysis: GAM for Full Original Sample (N = 175)

	Predictors	Estimate	Std. Error	t	F	edf	p
Main Effects	reading time of previous trial (log-transformed)				204.591	33.664	$< 2 \times 10^{-16}$ *
	d-prime				38.774	28.042	$< 2 \times 10^{-16}$ *
	mean d-prime singletasks				24.344	1.892	$< 2 \times 10^{-16}$ *
	mean comprehension question performance				5.348	2.305	3.23×10^{-3} *
	de-meaned comprehension question performance				39.408	7.477	$< 2 \times 10^{-16}$ *
	word frequency				6.837	7.571	$< 2 \times 10^{-16}$ *
	word length				73.076	4.038	$< 2 \times 10^{-16}$ *
	word entropy				4.027	3.704	2.44×10^{-3} *
	surprisal				9.547	4.107	$< 2 \times 10^{-16}$ *
	age				51.783	3.028	$< 2 \times 10^{-16}$ *
	n-back reaction [reaction vs. no reaction]	0.3167	0.00179	177.06			$< 2 \times 10^{-16}$ *
	block number	-0.0061	0.00017	-36.89			$< 2 \times 10^{-16}$ *
	trial number	-0.0004	0.00001	-64.47			$< 2 \times 10^{-16}$ *
	recording location (online vs. lab)	-0.2514	0.02602	-9.66			$< 2 \times 10^{-16}$ *
	cognitive load [1-back vs. Reading Only]	0.4318	0.02514	17.17			$< 2 \times 10^{-16}$ *
	cognitive load [2-back vs. Reading Only]	0.7819	0.02526	30.95			$< 2 \times 10^{-16}$ *
2-way Interaction	surprisal x cognitive load				13.962	13.849	$< 2 \times 10^{-16}$ *
3-way Interaction	surprisal x age x cognitive load [Reading Only]				23.946	10.248	$< 2 \times 10^{-16}$ *
	surprisal x age x cognitive load [1-back]				2.874	2.017	3.616×10^{-2} *
	surprisal x age x cognitive load [2-back]				2.392	4.877	2.375×10^{-2} *
Random Effects	Cognitive load I ID				255.250	508.610	$< 2 \times 10^{-16}$ *
	Text Nr.				4053.220	7.840	$< 2 \times 10^{-16}$ *
	Word				1.870	804.600	$< 2 \times 10^{-16}$ *
	Colour				12.530	2.770	$< 2 \times 10^{-16}$ *
Model Fit	R ²	0.815					

Note. p-values were computed using Wald's approximation as implemented in the package mgcv. Results that are significant on an alpha-level of 0.05 are marked with a star. Edf: Effective degrees of freedom.