

**Supplemental Material S3.** Multiple regression models predicting mean RT and RT difference scores for participants with impaired and unimpaired working memory.

	Unimpaired			Impaired		
<b>Mean RT: Sentences in Multispeakers</b>	Overall model: $F(4, 6) = 5.48, p = .16, R^2 = .92$			Overall model: $F(4, 8) = 1.18, p = .39, R^2 = .37$		
Predictors	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Age	0.17	0.72	.60	0.55	0.99	.35
Hearing Status	0.48	1.71	.23	0.06	0.11	.92
Working Memory	-1.21	-4.36	.049	-0.38	-1.29	.24
Attentional Control	0.40	1.63	.25	0.22	0.73	.49
<b>Mean RT: Sentences in Broadband Noise</b>	Overall model: $F(4, 6) = 3.42, p = .24, R^2 = .87$			Overall model: $F(4, 8) = 1.43, p = .31, R^2 = .42$		
Predictors	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Age	0.13	0.44	.71	0.47	0.88	.41
Hearing Status	0.55	1.57	.26	0.10	0.19	.86
Working Memory	-1.23	-3.61	.07	-0.29	-1.02	.34
Attentional Control	0.03	0.11	.93	-0.26	-0.88	.41
<b>Mean RT: Sentences in Silence</b>	Overall model: $F(4, 6) = 7.95, p = .12, R^2 = .94$			Overall model: $F(4, 8) = 0.79, p = .56, R^2 = .28$		
Predictors	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Age	0.25	1.22	.35	0.39	0.66	.53
Hearing Status	0.73	3.07	.09	0.19	0.32	.76
Working Memory	-1.14	-4.90	.04	-0.19	-0.59	.57
Attentional Control	-0.49	-2.58	.12	0.18	0.55	.60
<b>RT Difference: Effect of Informational Masking</b>	Overall model: $F(4, 6) = 2.98, p = .27, R^2 = .86$			Overall model: $F(4, 8) = 2.89, p = .09, R^2 = .59$		
Predictors	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Age	-0.04	-0.13	.91	0.08	0.19	.86
Hearing Status	-0.35	-0.95	.44	0.02	0.04	.97
Working Memory	0.50	1.37	.31	-0.12	-0.48	.65
Attentional Control	0.84	2.85	.10	0.78	3.16	.01
<b>RT Difference: Effect of Energetic Masking</b>	Overall model: $F(4, 6) = 0.69, p = .66, R^2 = .58$			Overall model†: $F(4, 8) = 8.91, p < .01, R^2 = .82$		
Predictors	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Age	-0.34	-0.62	.60	-0.42	-1.41	.20
Hearing Status	-0.36	-0.57	.63	0.34	1.13	.29
Working Memory	0.28	0.46	.69	-0.04	-0.25	.81
Attentional Control	0.80	1.58	.26	-0.81	-4.85	.001

†Model is not significant with attentional control outlier removed