

## Supplementary material

Table S1

Hierarchical multiple regression predicting Stroop-tones, Stroop-words, and Stroop interference score from age, educational level, hearing sensitivity, verbal working memory (raw score), and visual working memory (raw score)

Stroop-Tones									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.039	-.127	.162	-.029	-.094	.304	-.026	-.085	.372
Educational level	.458	.220	<b>.002</b>	.397	.190	<b>.007</b>	.393	.188	<b>.008</b>
Hearing sensitivity	-.232	-.282	<b>.002</b>	-.238	-.290	<b>.002</b>	-.236	-.287	<b>.002</b>
Verbal working memory	–	–	–	.231	.121	.090	.215	.133	.130
Visual working memory	–	–	–	–	–	–	.066	.032	.680
<i>R</i> <sup>2</sup>	.227			.240			.241		
<i>F</i>	16.937			13.570			10.838		
$\Delta R^2$	.227			.013			.001		
$\Delta F$	16.937			2.910			.097		
Stroop-Words									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.070	-.221	<b>.017</b>	-.048	-.152	.093	-.042	-.029	.157
Educational level	.610	.286	<b>.001</b>	.476	.223	<b>.001</b>	.468	.147	<b>.002</b>
Hearing sensitivity	-.093	-.110	.229	-.108	-.128	.150	-.102	-.075	.176
Verbal working memory	–	–	–	.509	.260	<b>.001</b>	.475	.142	<b>.001</b>
Visual working memory	–	–	–	–	–	–	.138	.160	.389
<i>R</i> <sup>2</sup>	.211			.270			.273		
<i>F</i>	15.427			15.927			12.872		
$\Delta R^2$	.211			.059			.003		
$\Delta F$	15.427			13.961			.001		
Stroop Interference Score									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	.112	.173	.086	.078	.121	.231	.069	.106	.311
Educational level	-.678	-.155	<b>0.043</b>	-.471	-.108	.165	-.457	-.105	.179
Hearing sensitivity	-.209	-.122	.229	-.187	-.109	.276	-.196	-.114	.256
Verbal working memory	–	–	–	-.785	-.196	<b>.011</b>	-.732	-.183	<b>.026</b>
Visual working memory	–	–	–	–	–	–	-.217	-.051	.556
<i>R</i> <sup>2</sup>	.043			.077			.078		
<i>F</i>	2.585			3.568			<.008		
$\Delta R^2$	.043			.034			0.002		
$\Delta F$	2.585			6.283			<b>.013</b>		

Note. **B**=unstandardized regression coefficient;  $\beta$ =standardized coefficient; *R*<sup>2</sup>=coefficient of determination;  $\Delta R^2$ =change in *R*<sup>2</sup>;  $\Delta F$ =change in *F*; –=not applicable; *p* ≤ .05=significant as indicated in bold

Table S2

Hierarchical multiple regression predicting Stroop-tones, Stroop-words, and Stroop interference score from age, educational level, hearing sensitivity, verbal working memory (raw score), and visual working memory (raw score)

Stroop-Tones									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.039	-.127	.162	-.032	-.103	.279	-.026	-.085	.372
Educational level	.458	.220	<b>.002</b>	.441	.212	<b>.003</b>	.393	.188	<b>.008</b>
Hearing sensitivity	-.232	-.282	<b>.002</b>	-.227	-.276	<b>.003</b>	-.236	-.287	<b>.002</b>
Verbal working memory	—	—	—	.133	.065	.390	.066	.032	.680
Visual working memory	—	—	—	—	—	—	.215	.113	.130
<i>R</i> <sup>2</sup>	.227			.230			.241		
<i>F</i>	16.937			12.869			10.838		
$\Delta R^2$	.227			.003			.010		
$\Delta F$	16.937			.743			2.317		
Stroop-Words									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.070	-.221	.017	-.054	-.170	.074	-.042	-.132	.157
Educational level	.610	.286	<b>.001</b>	.575	.269	<b>.001</b>	.468	.219	<b>.002</b>
Hearing sensitivity	-.093	-.110	.229	-.083	-.098	.283	-.102	-.121	.176
Verbal working memory	—	—	—	.286	.137	.073	.138	.066	.389
Visual working memory	—	—	—	—	—	—	.475	.243	<b>.001</b>
<i>R</i> <sup>2</sup>	.211			.226			.273		
<i>F</i>	15.427			12.535			12.872		
$\Delta R^2$	.211			.015			.048		
$\Delta F$	15.427			3.256			11.236		
Stroop Interference Score									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	.112	.173	.086	.087	.135	.200	.069	.106	.311
Educational level	-.678	-.155	<b>0.043</b>	-.622	-.143	.065	-.457	-.105	.179
Hearing sensitivity	-.209	-.122	.229	-.225	-.131	.196	-.196	-.114	.256
Verbal working memory	—	—	—	-.445	-.104	.217	-.217	-.051	<b>.556</b>
Visual working memory	—	—	—	—	—	—	-.732	-.183	<b>.226</b>
<i>R</i> <sup>2</sup>	.043			.051			.078		
<i>F</i>	2.585			2.329			2.913		
$\Delta R^2$	.043			.008			0.027		
$\Delta F$	2.585			1.539			5.032		

Note. **B**=unstandardized regression coefficient;  $\beta$ =standardized coefficient; *R*<sup>2</sup>=coefficient of determination;  $\Delta R^2$ =change in *R*<sup>2</sup>;  $\Delta F$ =change in *F*; —=not applicable; *p* ≤ .05=significant as indicated in bold

Table S3

Hierarchical multiple regression predicting Stroop-tones, Stroop-words, and Stroop interference score from age, educational level, hearing sensitivity, verbal processing speed (span length 4), and visual processing speed (span length 4)

Stroop-Tones									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.040	-.131	.152	-.031	-.101	.271	-.001	-.036	.710
Educational level	.425	.202	<b>.004</b>	.373	.178	<b>.012</b>	.343	.163	<b>.021</b>
Hearing sensitivity	-.226	-.272	<b>.003</b>	-.215	-.259	<b>.005</b>	-.192	-.231	<b>.012</b>
Verbal processing speed	—	—	—	.001	.161	<b>.025</b>	-.001	-.137	.059
Visual processing speed	—	—	—	—	—	—	-.001	-.153	.084
<i>R</i> <sup>2</sup>	.207			.230			.244		
<i>F</i>	14.705			12.571			10.782		
$\Delta R^2$	.207			.023			.014		
$\Delta F$	14.407			5.097			3.022		
Stroop-Words									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.069	-.216	<b>.018</b>	-.052	-.162	.066	-.027	-.083	.376
Educational level	.641	.293	<b>.001</b>	.546	.249	<b>.001</b>	.507	.232	<b>.001</b>
Hearing sensitivity	-.104	-.121	.187	-.084	-.098	.264	-.054	-.063	.474
Verbal processing speed	—	—	—	-.001	-.286	<b>.001</b>	-.001	-.257	<b>.001</b>
Visual processing speed	—	—	—	—	—	—	-.002	-.188	<b>.027</b>
<i>R</i> <sup>2</sup>	.214			.288			.308		
<i>F</i>	15.351			16.969			14.895		
$\Delta R^2$	.214			.074			.021		
$\Delta F$	15.351			17.364			4.987		
Stroop Interference Score									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	.108	.168	.093	.082	.127	.199	.053	.083	.439
Educational level	-.839	-.191	<b>0.013</b>	-.696	-.158	<b>.038</b>	-.652	-.148	.053
Hearing sensitivity	-.162	-.093	.350	-.192	-.110	.261	-.226	-.130	.193
Verbal processing speed	—	—	—	.002	.213	<b>.006</b>	.002	.196	<b>.013</b>
Visual processing speed	—	—	—	—	—	—	.002	.107	.268
<i>R</i> <sup>2</sup>	.057			.098			.104		
<i>F</i>	3.339			4.543			3.886		
$\Delta R^2$	.057			.041			0.007		
$\Delta F$	3.389			7.605			1.235		

Note. **B**=unstandardized regression coefficient;  $\beta$ =standardized coefficient; *R*<sup>2</sup>=coefficient of determination;  $\Delta R^2$ =change in *R*<sup>2</sup>;  $\Delta F$ =change in *F*; —=not applicable; *p* ≤ .05=significant as indicated in bold

Table S4

Hierarchical multiple regression predicting Stroop-tones, Stroop-words, and Stroop interference score from age, educational level, hearing sensitivity, verbal processing speed (span length 4), and visual processing speed (span length 4)

Stroop-Tones									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.040	-.131	.152	-.015	-.048	.624	-.011	-.036	.710
Educational level	.425	.202	<b>.004</b>	.379	.180	<b>.011</b>	.343	.163	<b>.021</b>
Hearing sensitivity	-.226	-.272	<b>.003</b>	-.196	-.236	<b>.011</b>	-.192	-.231	<b>.012</b>
Verbal processing speed	—	—	—	-.002	-.185	<b>.036</b>	-.001	-.153	.084
Visual processing speed	—	—	—	—	—	—	-.001	-.137	.059
<i>R</i> <sup>2</sup>	.207			.228			.244		
<i>F</i>	14.705			12.380			10.782		
$\Delta R^2$	.207			.0021			.016		
$\Delta F$	14.405			4.492			3.618		
Stroop-Words									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	-.069	-.261	<b>.018</b>	-.034	-.105	.278	-.027	-.083	.376
Educational level	.641	.293	<b>.001</b>	.578	.264	<b>.001</b>	.507	.232	<b>.001</b>
Hearing sensitivity	-.104	-.121	.187	-.062	-.072	.430	-.054	-.063	.474
Verbal processing speed	—	—	—	-.002	-.247	<b>.004</b>	-.002	-.188	<b>.027</b>
Visual processing speed	—	—	—	—	—	—	-.001	-.257	<b>.001</b>
<i>R</i> <sup>2</sup>	.214			.251			.308		
<i>F</i>	15.351			14.086			14.895		
$\Delta R^2$	.214			.037			.057		
$\Delta F$	15.351			8.302			13.828		
Stroop Interference Score									
Variables	Model 1			Model 2			Model 3		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
Age	.108	.168	.093	.064	.100	.357	.053	.083	.439
Educational level	-.839	-.191	<b>0.013</b>	-.761	-.173	<b>.025</b>	-.652	-.148	.053
Hearing sensitivity	-.162	-.093	.350	-.214	-.123	.224	-.226	-.130	.193
Verbal processing speed	—	—	—	.002	.213	<b>.006</b>	.002	.196	<b>.013</b>
Visual processing speed	—	—	—	—	—	—	.002	.196	<b>.013</b>
<i>R</i> <sup>2</sup>	.057			.071			.104		
<i>F</i>	3.389			3.195			3.886		
$\Delta R^2$	.057			.041			0.034		
$\Delta F$	3.389			2.521			6.251		

Note. **B**=unstandardized regression coefficient;  $\beta$ =standardized coefficient; *R*<sup>2</sup>=coefficient of determination;  $\Delta R^2$ =change in *R*<sup>2</sup>;  $\Delta F$ =change in *F*; —=not applicable; *p* ≤ .05=significant as indicated in bold