

Table 3.2

Participant demographics for each group: (a) TH listeners, (b) HA users, and (c) CI users.

Demographic	TH $M(SD)$	HA $M(SD)$	CI $M(SD)$
N	29	6	4
Gender	18 F, 11 M	2 F, 4 M	0 F, 4 M
Age	30.88 (6.12)	20.83 (3.97)	18.73 (0.65)
Speech Recognition ¹⁶⁻¹⁷	99.66 (1.20)	95.33 (7.66)	96.00 (4.32)
Physical Health ¹⁸	54.85 (7.09)	53.17 (4.53)	57.17 (5.62)
Mental Health ¹⁸	53.18 (9.66)	52.52 (9.36)	51.52 (10.79)
English Comprehension ¹⁹	96.93 (13.33)	86.00 (13.18)	86.25 (19.00)
Nonverbal Intelligence ²⁰	104.4 (13.88)	98.67 (8.98)	93.25 (16.98)

G Functional NIRS Source Localization Results

Table A1

Channel probabilistic brain MNI coordinates and AAL cytoarchitectural labels.

Ch.	Src.	Det.	MNI Coordinates			Cytoarchitecture ^a	Prob.
			X	Y	X		
1	1	1	-70.00	-33.67	8.67	Temporal Mid L	0.83
						Temporal Sup L	0.18
2	1	7	-67.00	-46.33	26.67	SupraMarginal L	0.83
						Temporal Sup L	0.18
3	2	1	-66.00	-7.67	5.33	Temporal Sup L	0.79
						Heschl L	0.08
						Temporal Mid L	0.08
						Rolandic Oper L	0.05
4	2	2	-58.00	20.67	3.67	Frontal Inf Tri L	0.90
						Frontal Inf Oper L	0.11
5	2	8	-63.00	9.00	18.00	Frontal Inf Oper L	0.70
						Precentral L	0.23
						Postcentral L	0.07
6	3	2	-52.00	44.67	-3.33	Frontal Inf Orb L	0.67
						Frontal Inf Tri L	0.29
						Frontal Mid Orb L	0.04
7	3	3	-34.33	65.00	-4.67	Frontal Mid Orb L	0.72
						Frontal Sup L	0.23
						Frontal Sup Orb L	0.06
8	3	9	-37.67	62.00	7.00	Frontal Mid L	0.95
						Frontal Sup L	0.05
9	4	3	-11.00	72.00	-7.00	Frontal Sup Orb L	0.62
						Frontal Mid Orb L	0.38
10	4	4	14.33	73.00	-5.67	Frontal Sup Orb R	0.69
						Frontal Mid Orb R	0.30
						Frontal Sup R	0.01
11	4	9	-15.00	73.00	5.00	Frontal Sup L	0.90
						Frontal Sup Medial L	0.10
12	4	10	17.67	73.00	5.67	Frontal Sup R	0.82
						Frontal Sup Medial R	0.18
13	5	4	37.67	65.33	-3.33	Frontal Mid Orb R	0.54
						Frontal Sup Orb R	0.32
						Frontal Mid R	0.13
						Frontal Sup R	0.01
14	5	5	53.33	46.67	-1.67	Frontal Inf Orb R	0.48
						Frontal Inf Tri R	0.47
						Frontal Mid R	0.03

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Table A1 – *Continued from previous page*

Ch.	Src.	Det.	MNI Coordinates			Cytoarchitecture ^a	Prob.
			X	Y	X		
15	5	10	40.67	62.33	8.33	Frontal Mid Orb R	0.03
						Frontal Mid R	0.92
						Frontal Sup R	0.08
16	6	5	60.33	22.67	5.33	Frontal Inf Tri R	0.82
						Frontal Inf Oper R	0.18
17	6	6	69.00	-7.33	8.33	Temporal Sup R	0.82
						Rolandic Oper R	0.17
						Heschl R	0.01
18	6	11	65.33	10.67	20.67	Precentral R	0.84
						Frontal Inf Oper R	0.16
19	7	6	72.00	-33.33	11.33	Temporal Sup R	0.98
						Temporal Mid R	0.02
20	7	12	68.00	-44.67	28.67	SupraMarginal R	0.94
						Temporal Sup R	0.06
21	8	1	-68.67	-18.67	22.67	Postcentral L	0.69
						SupraMarginal L	0.31
						SupraMarginal L	1.00
22	8	7	-66.00	-33.00	41.00	SupraMarginal L	1.00
23	8	8	-63.67	-4.67	34.67	Postcentral L	1.00
24	8	13	-59.00	-17.33	50.67	Postcentral L	0.62
						Parietal Inf L	0.36
						SupraMarginal L	0.02
25	9	2	-55.00	35.00	10.00	Frontal Inf Tri L	1.00
26	9	8	-56.67	22.67	26.33	Frontal Inf Tri L	0.99
						Frontal Inf Oper L	0.01
27	9	9	-42.67	52.33	20.67	Frontal Mid L	1.00
28	9	14	-45.67	39.00	32.00	Frontal Mid L	1.00
29	10	3	-10.67	73.00	11.67	Frontal Sup L	0.58
						Frontal Sup Medial L	0.42
30	10	4	14.67	73.00	12.33	Frontal Sup Medial R	0.79
						Frontal Sup R	0.21
31	10	9	-14.00	68.00	23.67	Frontal Sup L	0.96
						Frontal Sup Medial L	0.04
32	10	10	17.00	68.67	24.00	Frontal Sup R	1.00
33	11	5	57.33	36.67	11.67	Frontal Inf Tri R	1.00
34	11	10	44.33	52.67	22.33	Frontal Mid R	1.00
35	11	11	57.33	25.33	28.33	Frontal Inf Tri R	0.78
						Frontal Inf Oper R	0.22
36	11	15	47.33	39.33	33.33	Frontal Mid R	1.00
37	12	6	70.00	-18.33	26.33	SupraMarginal R	0.99
						Postcentral R	0.01
38	12	11	65.00	-2.33	37.67	Postcentral R	0.97

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Table A1 – *Continued from previous page*

Ch.	Src.	Det.	MNI Coordinates			Cytoarchitecture ^a	Prob.
			X	Y	X		
						Precentral R	0.03
39	12	12	68.00	-31.33	42.67	SupraMarginal R	1.00
40	12	16	59.00	-16.00	53.67	Postcentral R	1.00
41	13	7	-58.00	-46.33	52.33	Parietal Inf L	1.00
42	13	13	-49.67	-30.67	63.33	Postcentral L	1.00
43	14	8	-52.67	11.67	43.33	Precentral L	0.76
						Frontal Mid L	0.24
44	14	13	-47.67	-1.67	57.33	Precentral L	1.00
45	14	14	-41.67	26.67	48.67	Frontal Mid L	1.00
46	15	11	54.00	13.33	44.33	Precentral R	0.55
						Frontal Mid R	0.42
						Frontal Inf Oper R	0.03
47	15	15	43.67	27.67	48.67	Frontal Mid R	1.00
48	15	16	48.33	-0.67	58.67	Frontal Mid R	0.93
						Precentral R	0.07
49	16	12	58.33	-44.33	54.67	Parietal Inf R	1.00
50	16	16	49.67	-29.67	64.33	Postcentral R	1.00

Index. Ch., Channel; Src., Source Optode; Det., Detector Optode; Prob., Coverage Probability.

^aFor a reference to AAL cytoarchitectural labels, see Tzourio-Mazoyer et al. (2002).