

Supplemental Material S1. Item parameter estimations and fit statistics for the full CIQOL-item bank for development of the CIQOL-35 Profile instrument.

CIQOL-35	Item stem (items in final item bank)	Item parameters		Fit statistics			
		Difficulty	Discrimination	Infit MnSq	Infit Zstd	Outfit MnSq	Outfit Zstd
<i>Communication</i>							
X	Follow conversation in a group of 5	2.44	1.00	.99	.0	1.02	.3
	Understand announcements from public address (PA) systems	1.91	.82	1.16	2.2	1.16	1.9
	Understand whisper	1.65	.90	1.09	1.2	1.08	1.0
X	Understand strangers without lip reading in a noisy place	1.52	1.09	.94	-.8	.91	-1.2
	Understand someone speaking from another room	1.51	.95	1.04	.6	1.02	.3
	Understand in a noisy place without lip reading	1.50	1.21	.84	-2.3	.81	-2.5
X	Conversation in a noisy place without asking for repeat	1.13	1.37	.67	-5.2	.66	-5.1
	Conversation with 3+ people in a noisy place	1.02	1.07	.96	-.5	.94	-.8
X	Understand conversation in a crowded room	.90	1.31	.73	-4.1	.71	-4.3
	Understand someone speaking behind me	.77	1.18	.85	-2.2	.84	-2.3
X	Ask a lot of questions about what is being said	.69	1.12	.85	-2.2	.97	-.4
	Tell direction from where someone is talking ^a	.48	.51	1.46	5.5	1.52	6.0
	Follow what one person is saying when surrounded by noise	.31	1.10	.89	-1.5	.89	-1.5
	Follow the conversation when switching from one person to another in a group	.27	1.14	.89	-1.5	.86	-1.9
	Understand strangers without lip reading	.03	1.15	.90	-1.4	.86	-1.8
X	Hear and understand without looking	-.07	1.36	.67	-5.0	.66	-5.1
X	Conversation without asking for repeat	-.26	1.36	.67	-5.0	.67	-4.7
	Understand someone without reading lips	-.32	1.07	.97	-.4	.95	-.6
X	Conversation with 3+ people	-.62	1.21	.82	-2.6	.79	-2.8
	Other people's voices sound clear	-.97	1.20	.84	-2.2	.79	-2.6
	Spoken language sounds clear	-1.09	1.20	.84	-2.2	.80	-2.5
X	Other people's voices sound clear and natural	-1.14	.84	1.20	2.5	1.13	1.4
	Able to adapt my voice ^a	-1.19	.64	1.30	3.6	1.34	3.6
	Able to differentiate speech from noise ^a	-1.33	.54	1.43	5.1	1.74	6.9
	What I hear sounds natural ^a	-1.37	.61	1.39	4.7	1.35	3.6
	Conversation with 3+ people in quiet ^a	-1.96	.79	1.26	3.2	1.59	4.7
X	Conversation in quiet without asking for repeat	-2.01	.89	1.10	1.3	1.14	1.3
	Clearly hear own voice ^a	-3.82	.41	1.91	8.1	1.37	1.7
<i>Emotional</i>							
X	Frustrated when cannot follow conversation	1.78	.94	1.03	.4	1.04	.6
X	Keep quiet in conversation to avoid saying wrong thing	1.10	.92	1.06	.8	1.06	.9
	Hearing loss makes me feel less confident	.70	1.22	.84	-2.4	.81	-2.6
	Irritate people by asking for repeat ^a	.67	.76	1.14	1.9	1.21	2.6
	Feel handicapped by hearing ^a	.43	.78	1.22	2.9	1.20	2.4
	Hearing loss makes me feel anxious	.32	1.09	.94	-.8	.95	-.7
	Hearing loss decreases self esteem	.11	1.05	1.03	.4	.95	-.5
X	Hearing loss makes me irritable	-.10	1.16	.87	-1.8	.80	-2.4
	I am relaxed during conversation	-.23	1.08	.86	-1.9	.91	-1.0
	Hearing causes me to be embarrassed when meeting new people	-.28	1.19	.87	-1.8	.82	-2.1
X	Hearing loss makes me feel inadequate	-.36	1.29	.80	-2.8	.72	-3.4
	Confident in my responses during conversation	-.42	1.06	.85	-2.1	.89	-1.2
	Hearing loss makes me feel depressed	-.62	1.16	.88	-1.5	1.06	.6
	Embarrassed by hearing loss ^a	-.63	.55	1.50	5.6	1.50	4.4
X	Feel comfortable being myself	-2.48	.92	1.12	1.3	.92	-.3
<i>Entertainment</i>							
	Understand lectures, worship service, theaters without listening device ^a	.75	.59	1.24	3.1	1.40	4.7
X	Music sounds clear and natural	.71	1.11	1.00	.0	.95	-.6
	Clearly understand speech from radio and TV	.67	.94	.96	-.6	1.00	.0
X	Recognize melodies in music	.09	1.32	.73	-4.1	.72	-4.0
X	Able to enjoy music	-.25	1.05	1.09	1.2	.97	-.4
X	Able to enjoy listening to radio and TV	-.61	1.18	.85	-2.0	.84	-2.0
	Recognize rhythms in music	-.64	1.00	1.04	.6	.96	-.4
X	Due to hearing loss, listen to TV less often than I like	-.71	.89	1.16	2.0	1.06	.7
<i>Environment</i>							
X	Hear someone approach from behind	1.29	1.25	.78	-3.3	.78	-3.3
	Correctly locate source of sound ^a	.62	.77	1.21	2.7	1.21	2.7

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		Difficulty	Discrimination	Infit MnSq	Infit Zstd	Outfit MnSq	Outfit Zstd
X	Hear cars approaching in traffic	-.18	1.13	.90	-1.3	.86	-1.9
X	Distinguish sounds in nature	-.34	1.40	.62	-5.8	.62	-5.8
X	Everyday sounds sound natural	-.95	1.01	1.07	.9	.98	-.2
X	Everyday sounds are clear	-1.03	1.31	.74	-3.7	.68	-4.3
<i>Listening Effort</i>							
X	Have to concentrate during conversation with strangers in noisy place	2.47	1.20	.81	-2.6	.76	-2.1
	Have to concentrate during conversation with friends/family in noisy place	1.32	1.09	.89	-1.5	.87	-1.6
X	Have to concentrate during conversation	1.04	1.12	.92	-1.2	.90	-1.2
X	Easily have conversation in a noisy place	.16	1.00	1.03	.5	1.01	.2
	Tiring to listen ^a	-.74	.73	1.23	3.0	1.26	3.1
X	Ignore competing sounds and focus on who is speaking	-1.19	.98	1.00	.1	.97	-.3
	Stop following conversations due to fatigue	-1.44	.83	1.15	2.0	1.13	1.6
X	Takes minimal effort to follow conversation	-1.62	1.16	.81	-2.7	.90	-1.2
<i>Social</i>							
X	Feel left out in a group	1.19	1.17	.87	-1.8	.86	-2.0
	Avoid noisy places ^a	1.10	.69	1.27	3.4	1.31	3.8
	Hearing limits/hampers social life	.73	1.18	.89	-1.5	.85	-2.1
	Hearing loss causes me to want to be by myself ^a	.61	.76	1.24	3.0	1.26	3.1
	Relationships negatively impacted ^a	.58	.66	1.25	3.1	1.35	4.0
	Withdraw in social situations	.54	1.22	.81	-2.7	.83	-2.3
X	Avoid social situations	.49	1.30	.75	-3.7	.75	-3.5
	Appropriately answer questions in a group	.13	1.11	.83	-2.4	.94	-.7
	Tell someone's mood by tone of their voice ^a	.00	.26	1.57	6.4	1.85	7.91
	Always feel at ease in company	-.12	1.30	.68	-4.7	.68	-4.0
X	Hearing loss keeps me from socializing	-.33	1.36	.72	-4.0	.65	-4.2
	Avoid speaking with strangers	-.33	1.00	1.04	.5	.96	-.4
	Feel part of mainstream society	-.49	1.02	1.00	.0	.95	-.5
X	Have confidence to socialize	-.59	1.25	.78	-3.0	.72	-3.0
X	If interested, will join family/friends for social event	-1.72	.96	1.11	1.2	.97	-.1
	Able to start conversations	-1.79	.89	1.13	1.5	1.06	.4

Note. ^aItem demonstrates misfit to the IRT model. "X" denotes selection for the CIQOL-35.