Supplementary Material

The Relationship Between Hearing and Mild Behavioral Impairment and the Influence of Sex: A Study of Older Adults Without Dementia from the COMPASS-ND Study

Supplementary Table 1. Multivariable Regression Models for the Association between HHIE-S Score and MBI Burden in Non-Dementia

Outcome Variable	Exp(β) or OR (95% CI)	p
HHIE-S Models		
Global MBI Burden[a]	1.02 (1.00 – 1.04)	0.002
MBI Apathy[b]	1.09 (1.03 – 1.14)	0.002
MBI Affect[b]	1.08 (1.04 – 1.13)	<0.001
MBI Impulse[b]	1.02 (0.98 – 1.06)	0.37
MBI Social[b]	0.99 (0.94 – 1.05)	0.81
MBI Psychosis[b]	1.07 (1.00 – 1.14)	0.06
Audiometry Models		
Global MBI Burden[a]	-0.06 (-0.23 – 0.11)	0.51
MBI Apathy[b]	0.88 (0.65 – 1.18)	0.38
MBI Affect[b]	1.02 (0.82 – 1.26)	0.89
MBI Impulse[b]	0.99 (0.80 – 1.23)	0.94
MBI Social[b]	0.70 (0.48 – 1.02)	0.06
MBI Psychosis[b]	0.90 (0.59 – 1.37)	0.62
CDTT Models		
Global MBI Burden[a]	0.06 (-0.10 – 0.23)	0.46
MBI Apathy[b]	1.08 (0.93 – 1.26)	0.33
MBI Affect[b]	1.11 (0.97 – 1.27)	0.12
MBI Impulse[b]	0.97 (0.85 – 1.11)	0.68
MBI Social[b]	0.85 (0.66 – 1.10)	0.22
MBI Psychosis[b]	1.12 (0.91 – 1.37)	0.29

Models were adjusted for age, sex, years of education, hearing aids use, and MoCA score (n = 219). HHIE-S, Hearing Handicap Inventory for the Elderly – Screening Version; MBI, mild behavioral impairment; MoCA, Montreal Cognitive Assessment.

[a] Multivariable linear regression with standardized continuous log-transformed global MBI score as the outcome variable.

[b] Multivariable logistic regression with dichotomized MBI domain (presence/absence of symptoms) as the outcome variable.

Supplementary Table 2. Prevalence of MBI by HHIE-S Group (*data behind Fig. 1 in manuscript)

HHIE-S	All	0-8 No Hearing Handicap	10-24 Mild/Moderate Hearing Handicap	26-40 Significant Hearing Handicap
N	219	143	62	14
Global MBI	51.6	46.9	58.1	71.4
Apathy	16.0	11.2	21.0	42.9
Affective Dysregulation	35.2	28.7	41.9	71.4
Impulse Dyscontrol	32.9	32.2	30.6	50.0
Psychosis	51.6	46.9	58.1	71.4

MBI status was classified as positive if participants had a score of >0 in the relevant domain(s). All prevalence values reported as percentages. HHIE-S, Hearing Handicap Inventory for the Elderly – Screening Version; MBI, mild behavioral impairment.