Supplementary Table 2. Within-person association between subjective sleep-maintenance items and measured sleep continuity (early AD cohort)

Subjective item	Objective measure	n	Spearman ρ	95% CI	p-value	q (BH)
ISI-1b difficulty staying asleep	WASO	40	+0.001	-0.29 to +0.30	0.996	0.996
ISI-1b difficulty staying asleep	Sleep efficiency	40	+0.094	-0.19 to +0.37	0.562	0.996
ISI-1c waking too early	WASO	40	+0.099	-0.20 to +0.39	0.542	0.996
ISI-1c waking too early	Sleep efficiency	40	+0.100	-0.21 to +0.39	0.538	0.996
PSQI-5b woke in middle of night/early morning	WASO	41	+0.156	-0.15 to +0.44	0.330	0.996
PSQI-5b woke in middle of night/early morning	Sleep efficiency	41	+0.026	-0.30 to +0.33	0.871	0.996
[contrast] ISI-1a difficulty falling asleep	WASO	41	+0.053	-0.24 to +0.35	0.742	0.996
[contrast] ISI-1a difficulty falling asleep	Sleep efficiency	41	+0.051	-0.25 to +0.33	0.749	0.996

Bias-corrected and accelerated bootstrap 95% CIs, 10,000 resamples, seed 20260726. Benjamini–Hochberg correction applied across the eight tests specified in the revision analysis protocol. ISI item 1a (difficulty falling asleep) was included as a negative-control item, since it does not address sleep maintenance. At n=40–41 the minimum detectable |ρ| with 80% power (α=0.05, two-sided) is 0.43, and the critical |ρ| for nominal significance is 0.31. The confidence intervals are correspondingly wide—the upper bound for PSQI item 5b against WASO is +0.44—so a weak or moderate association cannot be excluded. These analyses do not establish the absence of coupling between the items and the objective measures; restricted item variability attenuates correlation independently of sleep perception.

ISI, Insomnia Severity Index; PSQI, Pittsburgh Sleep Quality Index; AD, Alzheimer's disease; WASO, wake after sleep onset; CI, confidence interval; BH, Benjamini–Hochberg.