**Supplementary Table S1.** Sensitivity Analysis Using Baseline Observation Carried Forward (BOCF) Across Primary and Secondary Clinical Outcomes.

| Outcome | IVR Baseline EMM | IVR Post-intervention EMM | IVR change (95% CI) | Control Baseline EMM | Control Post-intervention EMM | Control change (95% CI) | Group × Time, F | Unadjusted p | Holm-adjusted p |
|---|---|---|---|---|---|---|---|---|---|
| FIQR | 65.60 | 54.40 | −11.17 (−15.30 to −7.03) | 60.60 | 59.90 | −0.67 (−4.80 to 3.47) | 13.30 | <0.001 | — |
| MoCA | 22.10 | 25.30 | +3.22 (1.87 to 4.57) | 23.80 | 24.20 | +0.39 (−0.96 to 1.74) | 9.12 | 0.005 | 0.024 |
| Jenkins Sleep Questionnaire | 14.10 | 10.90 | −3.17 (−4.44 to −1.89) | 14.20 | 13.70 | −0.56 (−1.83 to 0.72) | 8.66 | 0.006 | 0.024 |
| DASS-21 Depression | 9.61 | 9.22 | −0.39 (−1.66 to 0.88) | 12.72 | 11.33 | −1.39 (−2.66 to −0.12) | 1.28 | 0.265 | 0.796 |
| DASS-21 Stress | 13.61 | 11.78 | −1.83 (−3.42 to −0.24) | 13.06 | 11.17 | −1.89 (−3.48 to −0.30) | 0.003 | 0.960 | 1.000 |
| DASS-21 Anxiety | 10.89 | 10.78 | −0.11 (−1.24 to 1.02) | 12.28 | 11.83 | −0.44 (−1.57 to 0.68) | 0.18 | 0.674 | 1.000 |

**Note:** BOCF, baseline observation carried forward; IVR, immersive virtual reality; EMM, estimated marginal mean; CI, confidence interval; FIQR, Fibromyalgia Impact Questionnaire-Revised; MoCA, Montreal Cognitive Assessment; DASS-21, Depression Anxiety Stress Scales-21. Missing post-intervention values were replaced with the corresponding baseline values, resulting in 36 participants and 72 observations in the sensitivity dataset. Linear mixed-effects models included fixed effects for group, time, and the group × time interaction, with a participant-specific random intercept. Within-group changes represent estimated post-intervention minus baseline contrasts. The group × time interaction was used to evaluate differential change between groups. FIQR was the primary outcome and was not included in the multiplicity adjustment. Holm's sequential procedure was applied across the five secondary outcomes. These analyses were considered supportive sensitivity analyses rather than confirmatory evidence.