**Table S3. Rasch analysis of the Mini-BESTest**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Population**  **Study**  **Year** | **Data fit/LocaL Item Dependence and Dimensionalilty** | **DIF Analysis** | **Person Reliability/**  **Person Separation**  **Index** | **Item Reliability/**  **Item Separation**  **Index** | **Cosmin Score/**  **Quality Score** |
| **Parkinson´s disease** | | | | | |
| Maia AC, 2013 [40] | Infit/outfit MnSq:  0.45-1.62/0.53-1.89 | No DIF | NR | NR | Doubtful/? |
| Wallén MB, 2016 [45] | Infit/outfit MnSq:  0.541-1.066/0.347-1.043  Dimensionality:2.01 | No DIF | NR | NR | Adequate/- |
| Franchignoni F, 2022 [52] | Infit/outfit MnSq:  0.79-1.21/0.63-1.13 | No DIF | 0.91/NR | 0.99/NR | Adequate/- |
| **Stroke** | | | | | |
| Goljar N, 2017 [58] | Infit/outfit MnSq:  0.71-1.42/0.59-1.20  Dimensionality:73.3%, 1.7  Dependy local: r=0.23 | No DIF | 0.94/0.48 | 0.99/14.01 | Adequate/+ |
| Miyata K, 2022 [68] | Infit/outfit MnSq:  0.44-1.94/0.31-3.49  Dimensionality:67.6% | No DIF | 0.89/2.88 | 0.98/7.72 | Adequate/- |
| **Population**  **Study**  **Year** | **Data fit/LocaL Item Dependence and Dimensionalilty** | **DIF Analysis** | **Person Reliability/**  **Person Separation**  **Index** | **Item Reliability/**  **Item Separation**  **Index** | **Cosmin Score/**  **Quality Score** |
| **Adults patients with diverse neurological diagnoses** | | | | | |
| Franchignoni F, 2010 [16] | Infit/outfit MnSq:  0.81-1.2/0.8-1.2  Dimensionality:68%  Dependy local: r=0.25 | No DIF | 0.91/3.24 | 0.99/12.0 | Adequate/+ |
| Franchignoni F, 2015 [83] | Infit/outfit MnSq:  0.75-1.30/0.66-1.32 | No DIF | 0.86/2.50 | 0.98/7.35 | Adequate/+ |
| Caronni A, 2023 [85] | Infit/outfit MnSq:  0.74-1.30/0.58-1.23 | No DIF treatment  DIF diagnosis  DIF assistive devices | 0.91/NR | NR | Adequate/- |
| **Older adults** | | | | | |
| Maia AC, 2013 [40] | Infit/outfit MnSq:  0.45-1.62/0.53-1.89 | No DIF | NR | NR | Doubtful/? |
| **Spinocerebellar ataxia** | | | | | |
| Miyata K, 2024 [108] | Infit/outfit MnSq:  0.54-1.76/0.03-1.31 | No DIF | 0.87/NR | NR | Adequate/- |