

Supplementary material to article by R. Maritz et al. "The functional independence measure 18-item version can be reported as a unidimensional interval-scaled metric: internal construct validity revisited"

**Appendix S2.** Functional Independence Measure (FIM™) 2-testlet approach repeated for all aggregation levels of the calibration sample

Sample	n/CI	Item-fit residuals		Person-fit residuals		$\chi^2$	p-value	PSI	$\alpha$	DIF (Testlet)	t-test 5% level (if > 5%, lower CI) (%)	A	cond. test of fit CI based
		Mean (SD)	Mean (SD)										
MSK_t1	246/4	-0.028 (0.125)	-0.565 (0.999)	0.920	0.983	0.979	language (T1, T2)			3.25		1.023	0.973
MSK_t2	230/4	0.045 (0.240)	-0.596 (0.997)	0.849	0.982	0.981	No DIF			4.35		1.016	0.739
MSK_all	476/8	-0.127 (0.257)	-0.606 (0.985)	0.890	0.981	0.980	age (T2) language (T1, T2) time-point (T1, T2)			4.62		1.020	0.965
NEUR_t1	228/4	0.032 (0.045)	-0.533 (0.861)	0.217	0.982	0.984	No DIF			4.39		1.019	0.139
NEUR_t2	242/4	0.016 (0.190)	-0.552 (0.937)	0.270	0.979	0.982	No DIF			6.20 (0.0)		1.015	0.206
NEUR_all	470/8	-0.080 (0.185)	-0.554 (0.888)	0.041	0.980	0.983	age (T2)			5.32 (0.0)		1.017	0.120
t1_all	474/8	-0.105 (0.151)	-0.633 (1.012)	0.825	0.981	0.980	rehab-group (T1, T2)			5.06 (0.0)		1.021	0.705
t2_all	472/8	-0.067 (0.305)	-0.588 (0.968)	0.734	0.980	0.981	No DIF			5.93 (4.0)		1.016	0.542
FIM all	946/10	-0.208 (0.317)	-0.614 (1.003)	0.408	0.980	0.981	rehab-group (T1, T2)			4.97		1.019	0.607
Acceptable values		SD < 1.4	SD < 1.4	>0.01	>0.7	>0.7	No DIF			at least lower ci<5 %	>0.9		>0.01

MSK: musculoskeletal rehabilitation; NEUR: neurological rehabilitation; t1: admission, t2: discharge; all: combination of time-points or/and rehabilitation-groups; n: sample size; CI: class intervals; ci: confidence interval; SD: standard deviation; PSI: person separation index;  $\alpha$ : Cronbach's alpha; DIF: differential item functioning.