Images of Ely

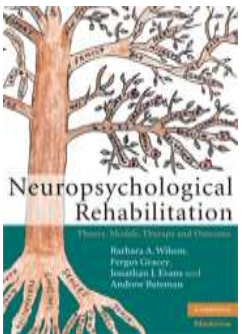
- OZC 1996-2012

- We describe our service under various headings
- Neuropsychological assessment and advice
- Rehabilitation programmes for adults - and new since 2010 – children – the “CCPNR”

- Research and publication on neuropsychology
- NeuroRehab management

- Neuropage (www.neuropage.nhs.uk)

- Education of carers and professionals



A Pilot Rasch Analysis of the Forms of Self-Criticism and Self-Reassurance Scale in Acquired Brain Injury

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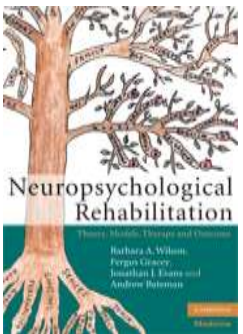
CAMBRIDGE NEUROSCIENCE

MRC Cognition and Brain Sciences Unit

NHS East of England



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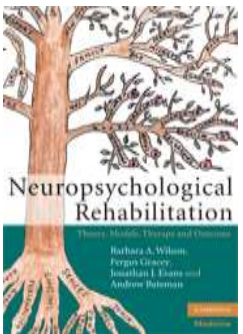
Sample size again. Wright BD, Tennant A . … Rasch Measurement Transactions, 1996, 9:4 p.468

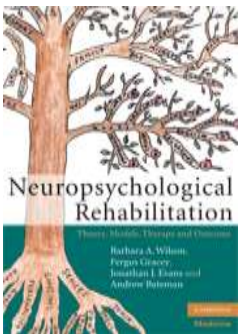
But for pilot studies, 30 persons are enough to see what's happening (see Best Test Design).

Even if you plan to test 200, start the analysis as soon as the first data become available: 200 incorrect administrations are never as good as 50 correct ones.



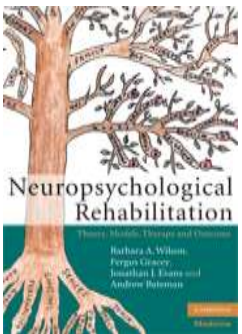
- **Sample Size and Item Calibration [or Person Measure] Linacre JM. Rasch Measurement Transactions 1994 7:4 p.328**

... Thus, a sample of 50 well-targeted examinees is conservative for obtaining useful, stable estimates. 30 examinees is enough for well- designed pilot studies. The Table suggests other ranges. Inflate these sample sizes by 10%-40% if there are major sources of unmodelled measurement disturbance, such as different testing conditions or alternative curricula



Why use Rasch Analysis on the Forms of Self Criticism & Self Reassurance?

Anxiety and depression are common after ABI. Transdiagnostic processes such as self-criticism are linked to depression but are less understood after ABI. Measures of self-criticism are not well validated in this population. The **Forms of Self-Criticism and Self-Reassurance Scale (FSCSR)** may be a useful tool for understanding self-criticism after brain injury therefore there is a good rationale for assessing its construct validity.



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47 patients data
(assessment at OZC)
72% sample male

Median age 34

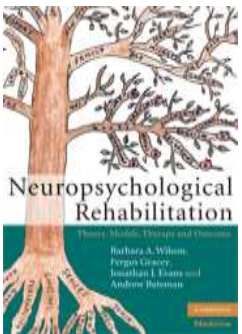
ABI of 1-10 years prior to assessment at OZC

Analysis of responses to FSCSR in RUMM2020

FSCSR (22-items)

3 subtypes of self-to-self relating

hated self
inadequate self
reassure self



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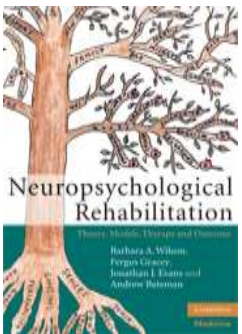
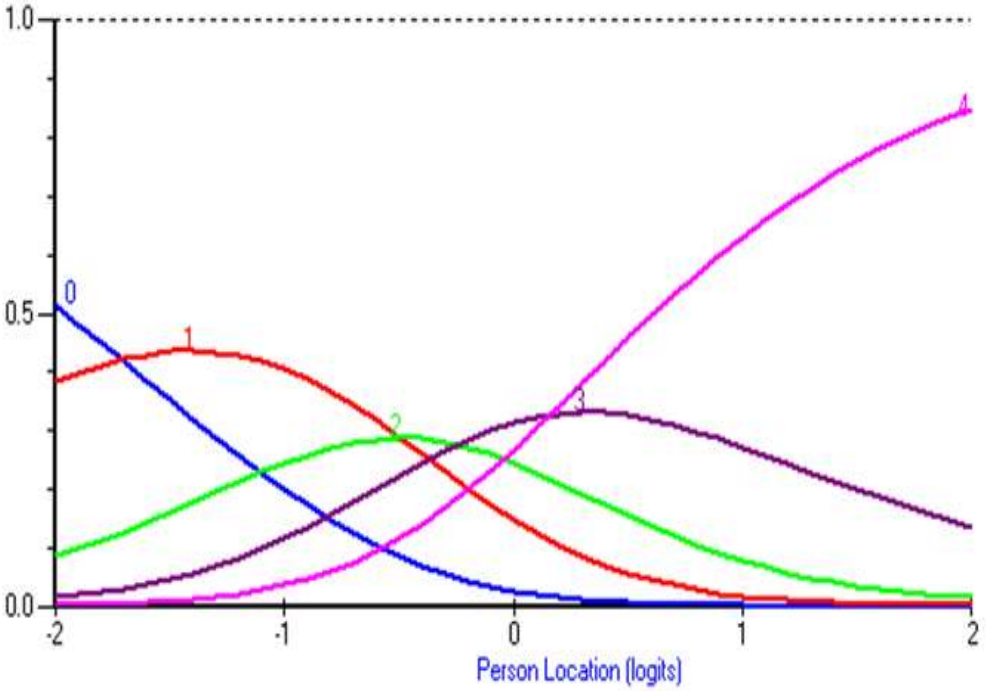
FSCSR has good fit to the model:

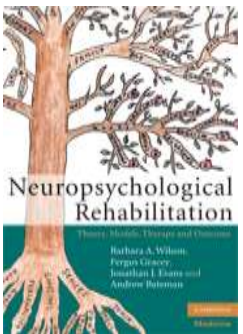
- Item trait interaction analysis non-significant chi square (0.161, p>0.05)
- Reliability index (person separation index 0.91)
- Power of test of fit – excellent



All thresholds were disordered
eg. item 16 here

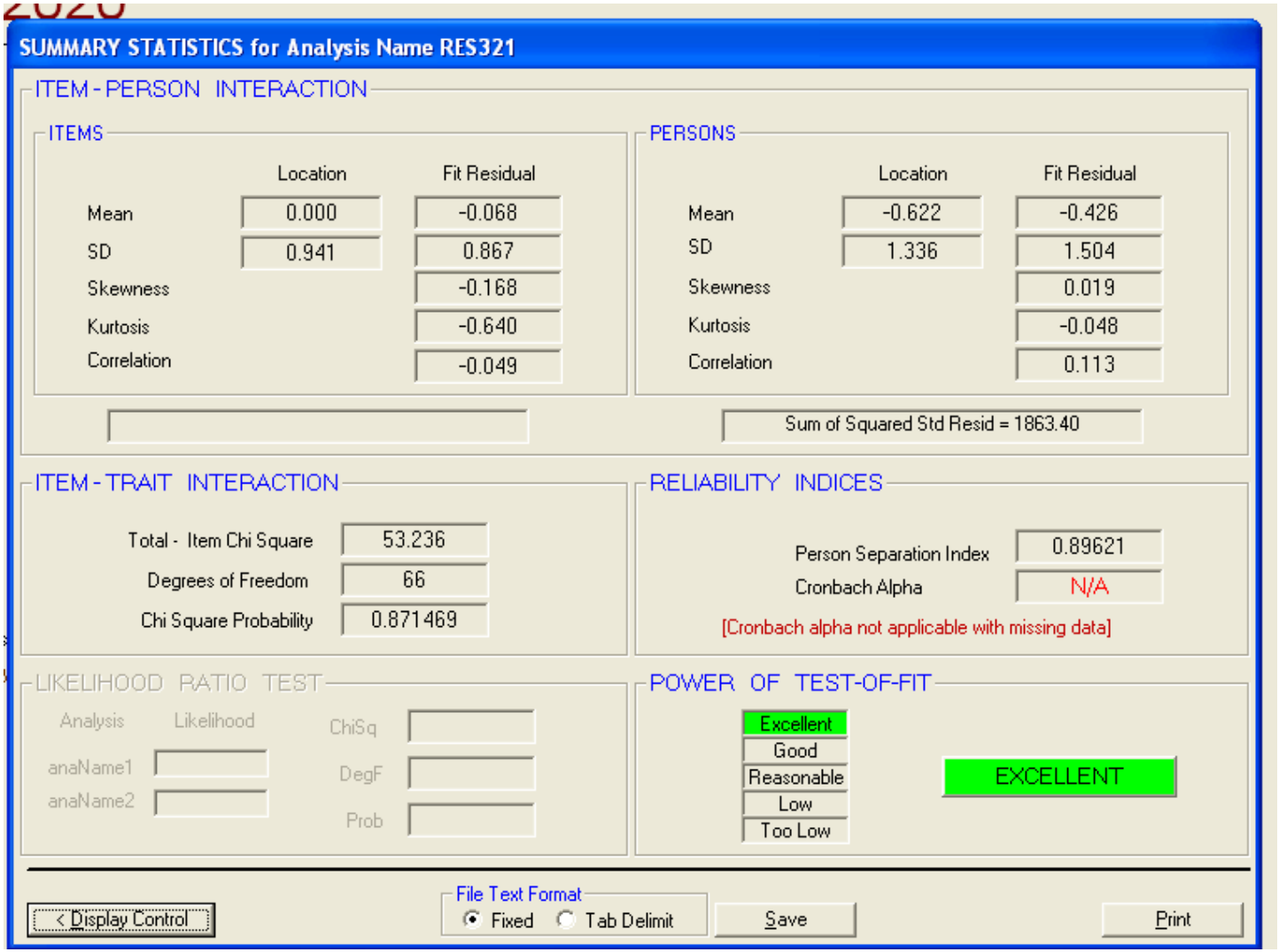
All were rescored to 3 levels

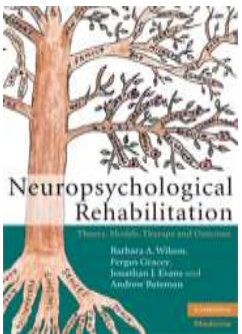





Easily disappointed with self
There is a part of me that puts me down
Able to remind myself about positive things about myself
Difficult to manage my anger & frustration at myself
I find it easy to forgive myself
There is a part of me that feels I am not good enough
I feel beaten down by my own self critical thoughts
I still like being me
I have become so angry with myself that I want to hurt myself
I have a sense of disgust with myself
I can feel lovable and acceptable
I stop caring about myself
I find it easy to like myself
I remember & dwell on my failings
I call myself names
I am gentle and supportive with myself
I cant accept failures & setbacks without feeling adequate
I think I deserve my self criticism
I able to care and look after myself
There is a part of me that wants to get rid of parts of myself
-4
-3
-2
-1
0
1
2
3
4
5

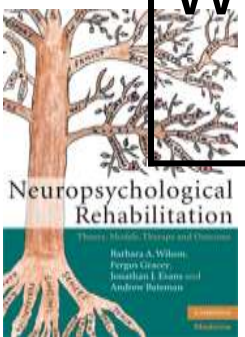
After rescoring – marginal shift in PSI, fit



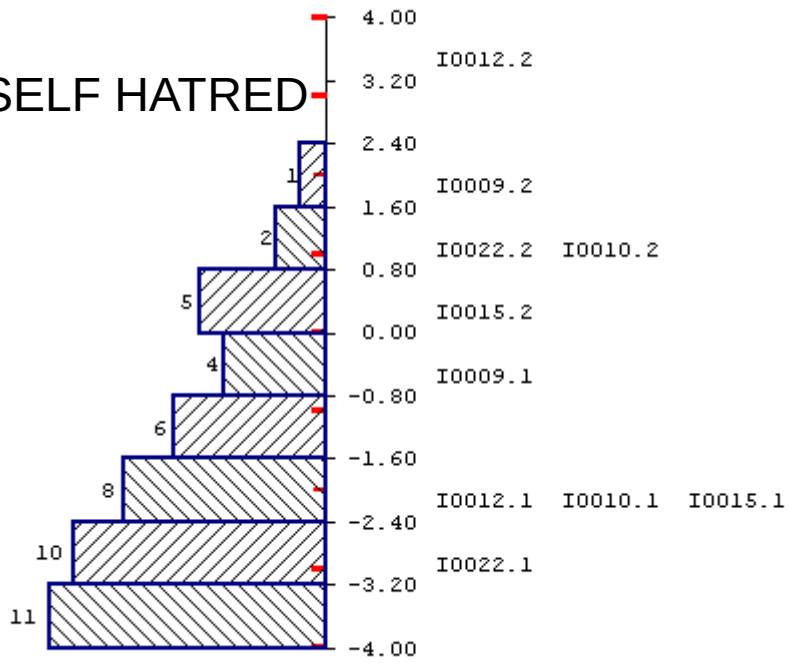


Examining the subscales

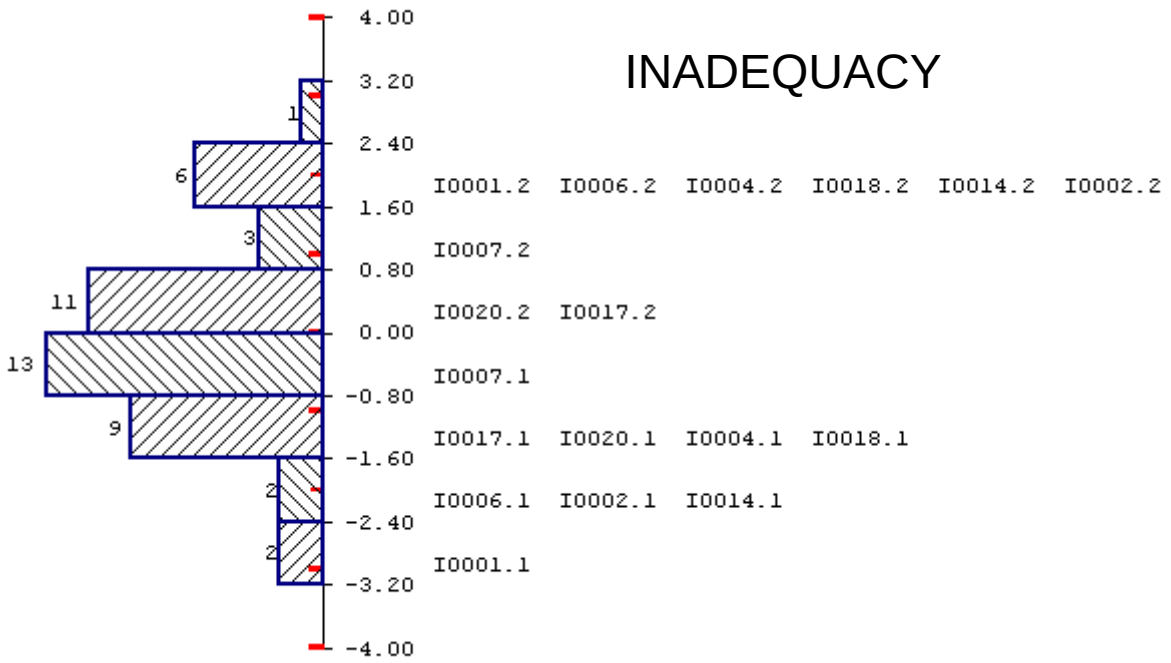
	ChiSq	Locn (Person)	PSI	?
Inadequacy	13.5, p=.76	-0.016 (1.3)	0.77	
Hatred	3.5 P=.96	-1.87 (1.7)	0.77	
Reassure	17.7 P=.34	-.574 (1.7)	0.78	
Whole scale	53 P=.87	-.622 (1.33)	0.896	



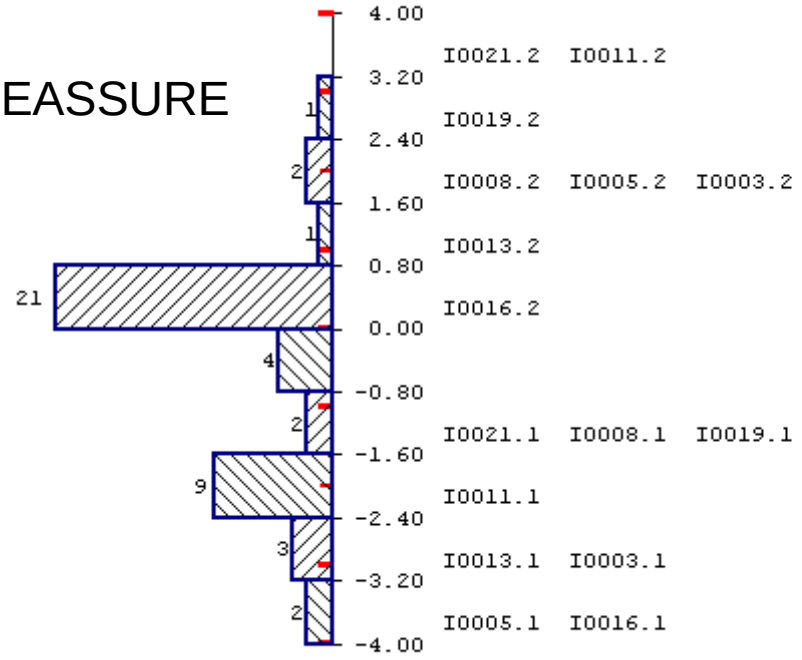
SELF HATRED



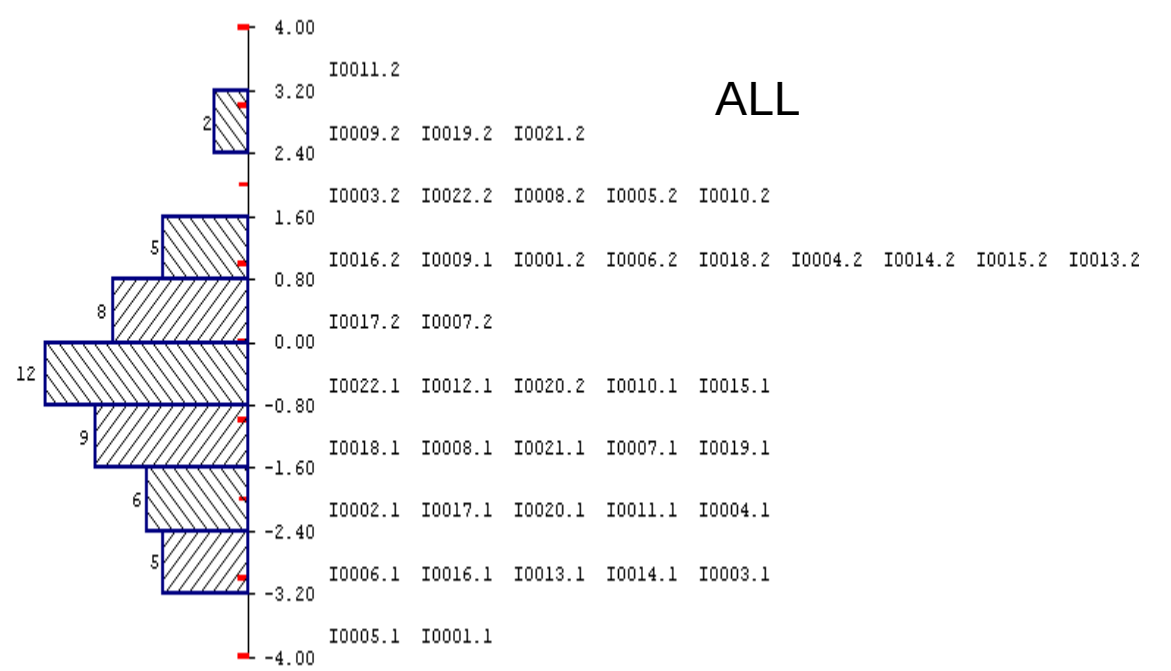
INADEQUACY



REASSURE

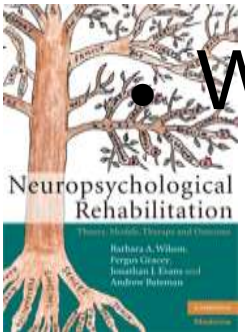


ALL



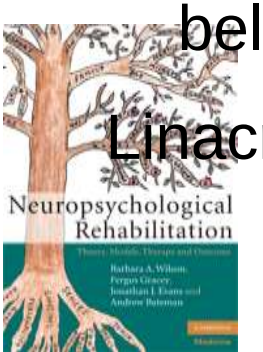
Discussion

- “enough to see what's going on”
- Clearly a problem with sample size, but lack of clarity about what to do (except carry on collecting data – for discrete tests like this might take us 6 years to get to “acceptable for publication” sample?)
- Meaning of a logit in this context...
- What can we conclude?
- What steps to follow to simulation?



Small sample size? You can certainly perform useful exploratory work using Rasch analysis with a small sample. One of the foundational books in Rasch analysis, "Best Test Design" (Wright & Stone, 1979), is based on the analysis of a sample of 35 children and 18 items. The problem is not Rasch analysis, the problem is that a small sample is small for any type of definitive statistical analysis. There would be the same problem with any other type of statistical analysis. However, one way of strengthening your findings is to analyze your data, **and then simulate 100 datasets using the measures estimated from your data (using, for instance, the Winsteps "simulate data" option). Then analyze the 100 datasets.** You can then draw the distributions of the crucial statistics in the 100 datasets and locate your dataset among them. The closer your empirical dataset is to the center of the distribution of the 100, the more believable are your findings.

Linacre (ibid)



Thanks for your attention...

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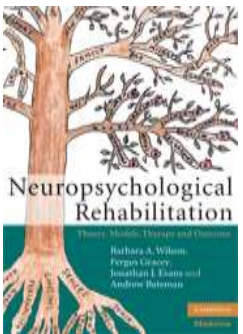
Twitter @ozcboss



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