

Advanced course in questionnaire research

Ph.D. course

Exercise Rasch model in Stata

The datafile “exercise Rasch data.dta” contains a subset of data from a large population survey. It consist of the following variables: id: person id number, items wi1-wi8 , gender and age. The 8 items reflect the construct illness worry. The instrument is shown in the attachment.

Exercise 1

Estimate a partial credit model for all 8 items. Inspect all CPC curves. Are any of them displaying problems with ordering of the response categories?

Commands:

```
irt pcm wi1-wi8  
irtgraph icc wi1, title("8 items: wi1 cpc")
```

Exercise 2

Make the test characteristic curve

Commands:

```
irt pcm wi1-wi8  
irtgraph tcc
```

Exercise 3

Investigate if there is DIF for gender using the ordinal logistic regression method.

Commands:

```
Non-uniform DIF  
ologit wi1 b1.gender##c.score_whiteley8, or  
Uniform DIF  
ologit wi1 b1.gender c.score_whiteley8, or
```