Assessing Fit of IRT Models

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Outline

- Background information
- The issue
- The current study
 - Research questions
- Simulation study
 - Data generation
 - Simulation design
 - 9 Performance metrics
- Questions
- References





1. Background information

- IRT
 - Latent constructs
 - Tests/questionnaires
 - Assessing model fit
 - Goodness-of-fit tests
 - Fit indices

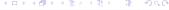




2. The issue

- Esimation and consistency issues
- Few goodness-of-fit tests
 - Issues with current tests
- Scarce studies for TLI and CFI





3. The current study

- New goodness-of-fit test
- TLI and CFI

3.1. Research questions

- Required sample size?
- Comparing performance
- Performance of TLI and CFI?





4. Simulation study

4.1. Data generation

- Dichotomous items
- Static item parameters
- Two models: 2PL, 3PL
- Varying four factors





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4.2. Simulation Design

Table: Overview of Simulation Conditions for Each Factor

Factor	Conditions	Description
Test length	5 - 10 - 20	The total number of items that the test will consist of
Sample size	100 - 200 - 500 1000 - 1500	The total number of observations that are available for each item
Model type	2PL - 3PL	The models that we will use as the basis for data generation
Number of groups	2 - 3 - 4	The number of groups that the data gets divided into for the LR Randomisation test calculations

4.3. Performance metrics

Goodness-of-fit tests

- Power
- ullet Empirical lpha

Fit indices

Mean (SE)





Thank you for listening!





References



