

Ordinal Logistic Regression for Likert Data

Method: Ordinal Logistic Regression for Likert Data

Method type: regression_model

Design: Cumulative-logit proportional-odds model for the five-level family-relationship response.

Variables: famrel, studytime, age, failures, sex

Inference scope: The applicable omnibus likelihood-ratio test compares the fitted predictor model with the intercept-only ordinal model.

Formula: $\text{logit}[P(Y \leq j)] = \theta_j - X \cdot \beta$; $LR = 2 \cdot (LL_{\text{model}} - LL_{\text{null}})$.

Source rows: 649

Calculated metrics:

log_likelihood: -806.707348829321

null_log_likelihood: -810.470052417161

likelihood_ratio: 7.5254071756799

lr_df: 4

lr_p_value: 0.110594148275184

mcfadden_r_squared: 0.00464261890568074

studytime_coefficient: 0.0512311600793445

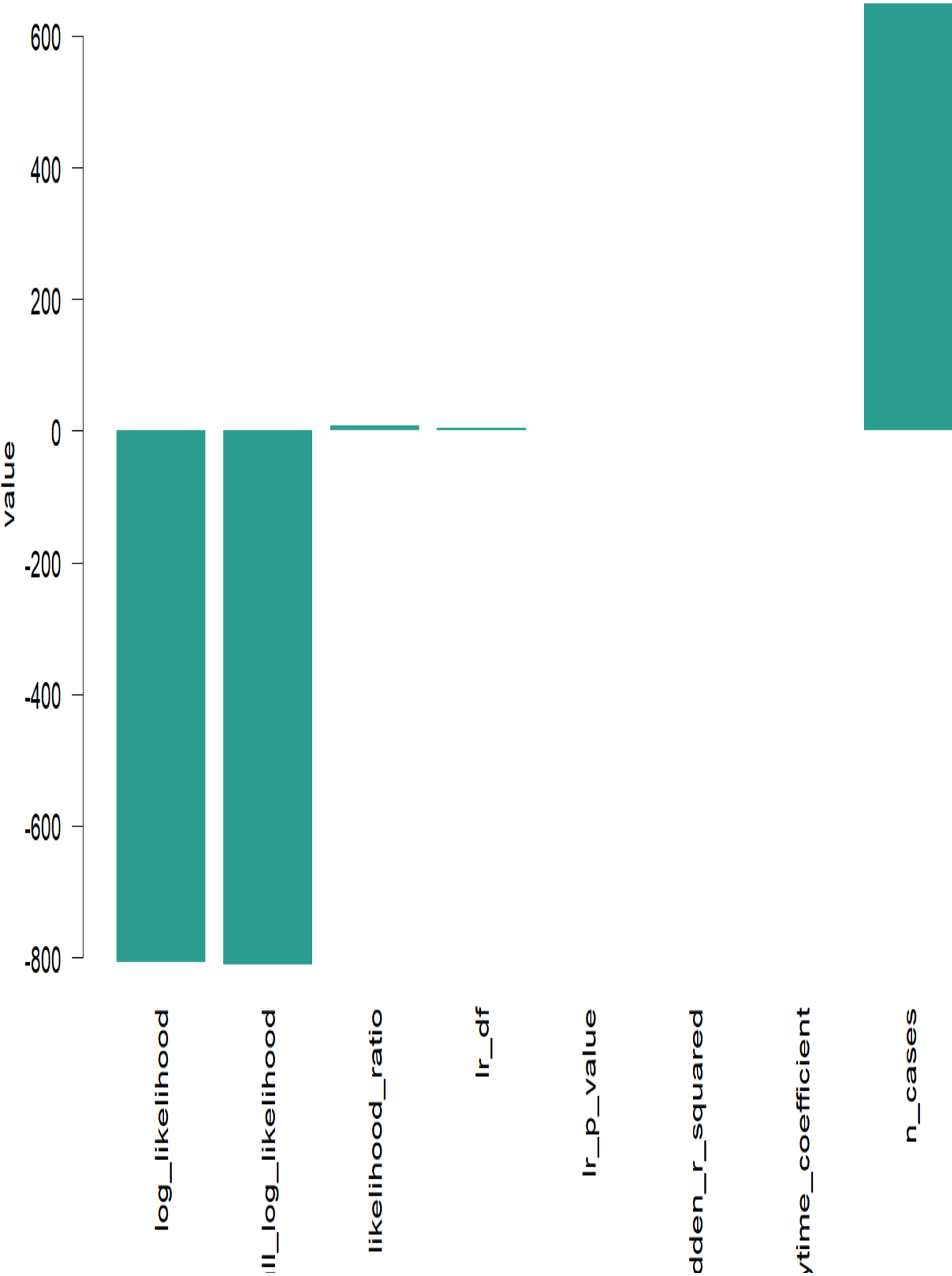
n_cases: 649

Interpretation:

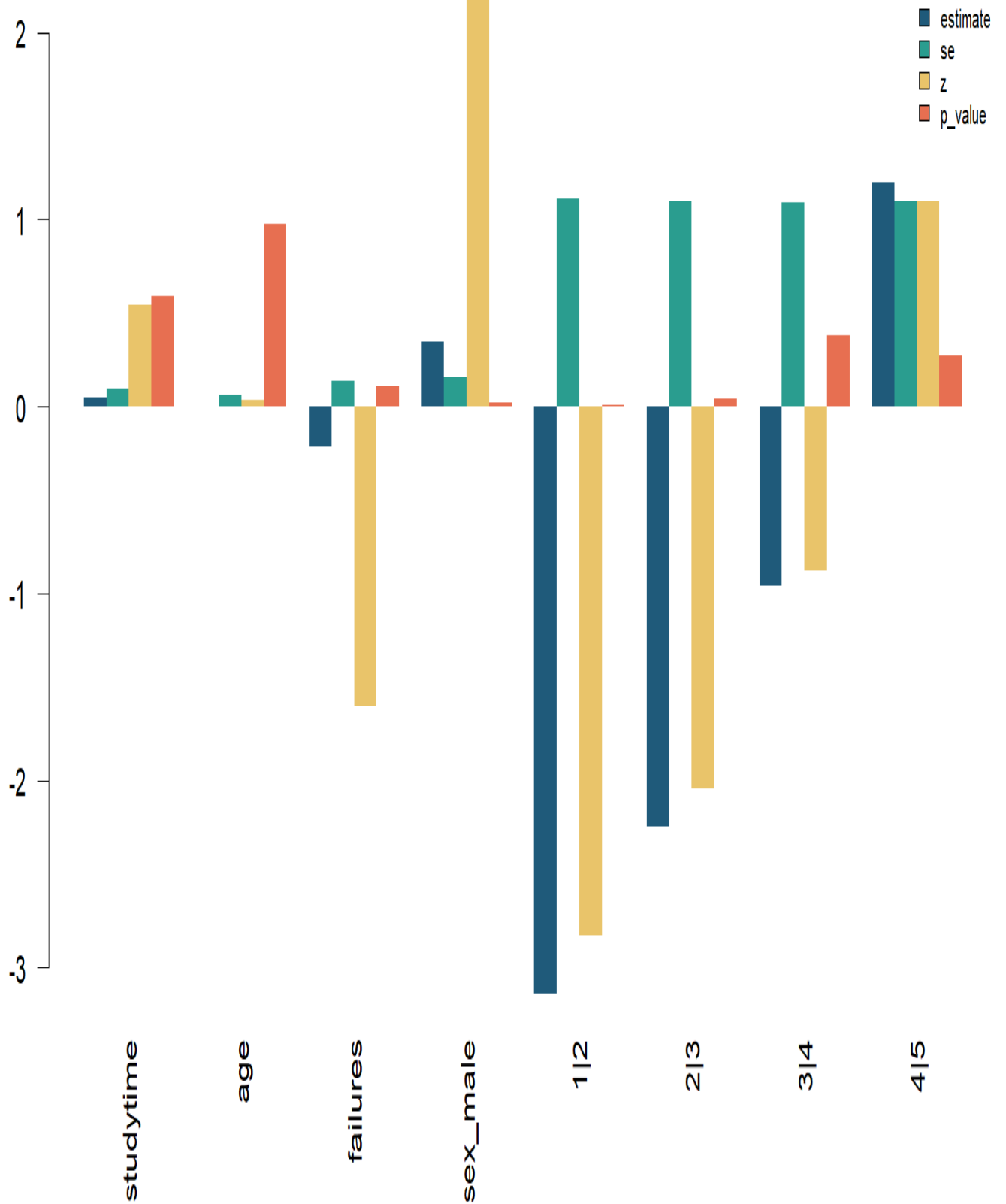
The proportional-odds model estimates common slopes.

Likelihood ratio 7.5254071756799 McFadden R2 0.00464261890568074

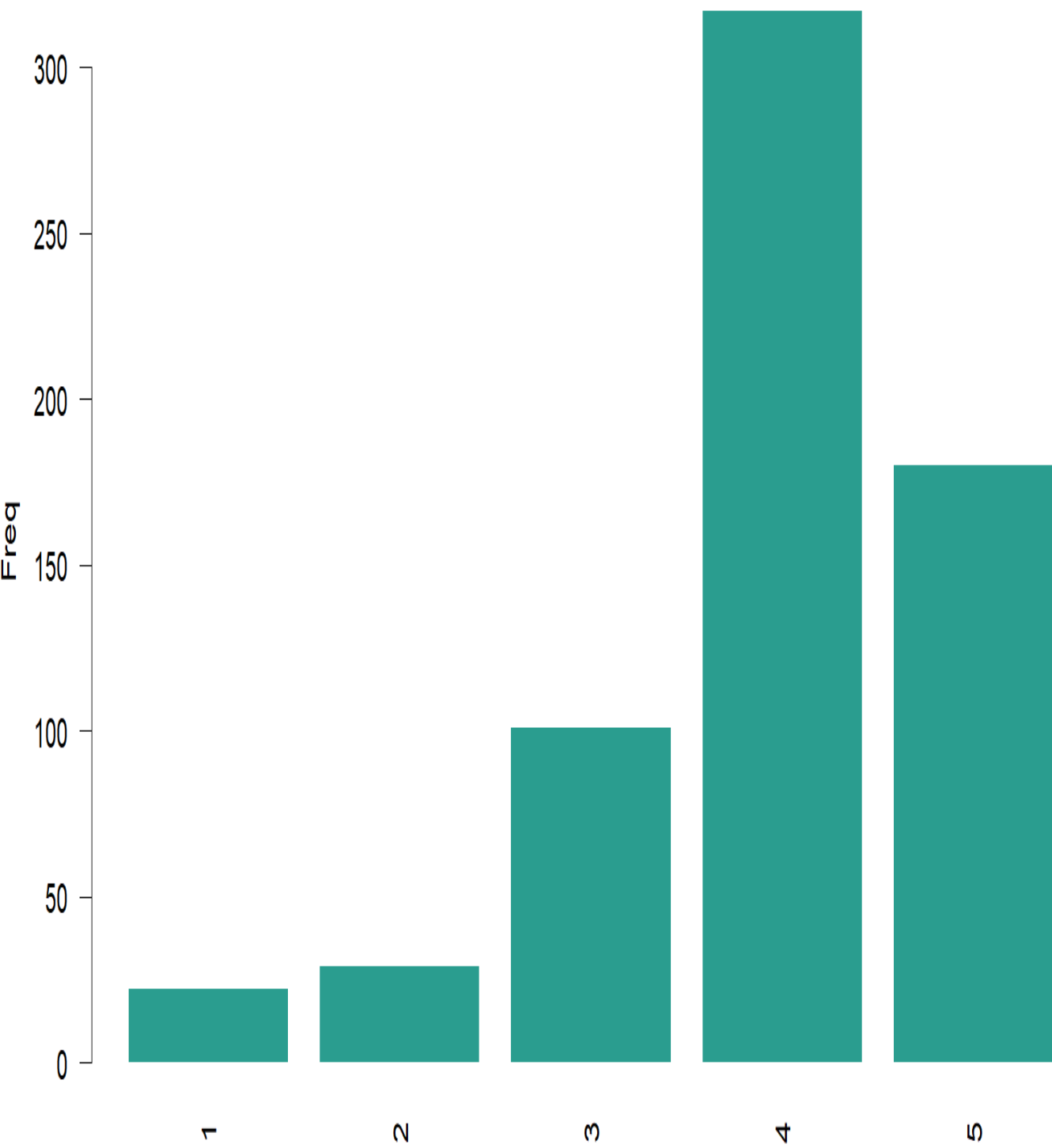
Ordinal Logistic Regression for Likert Data - primary metrics



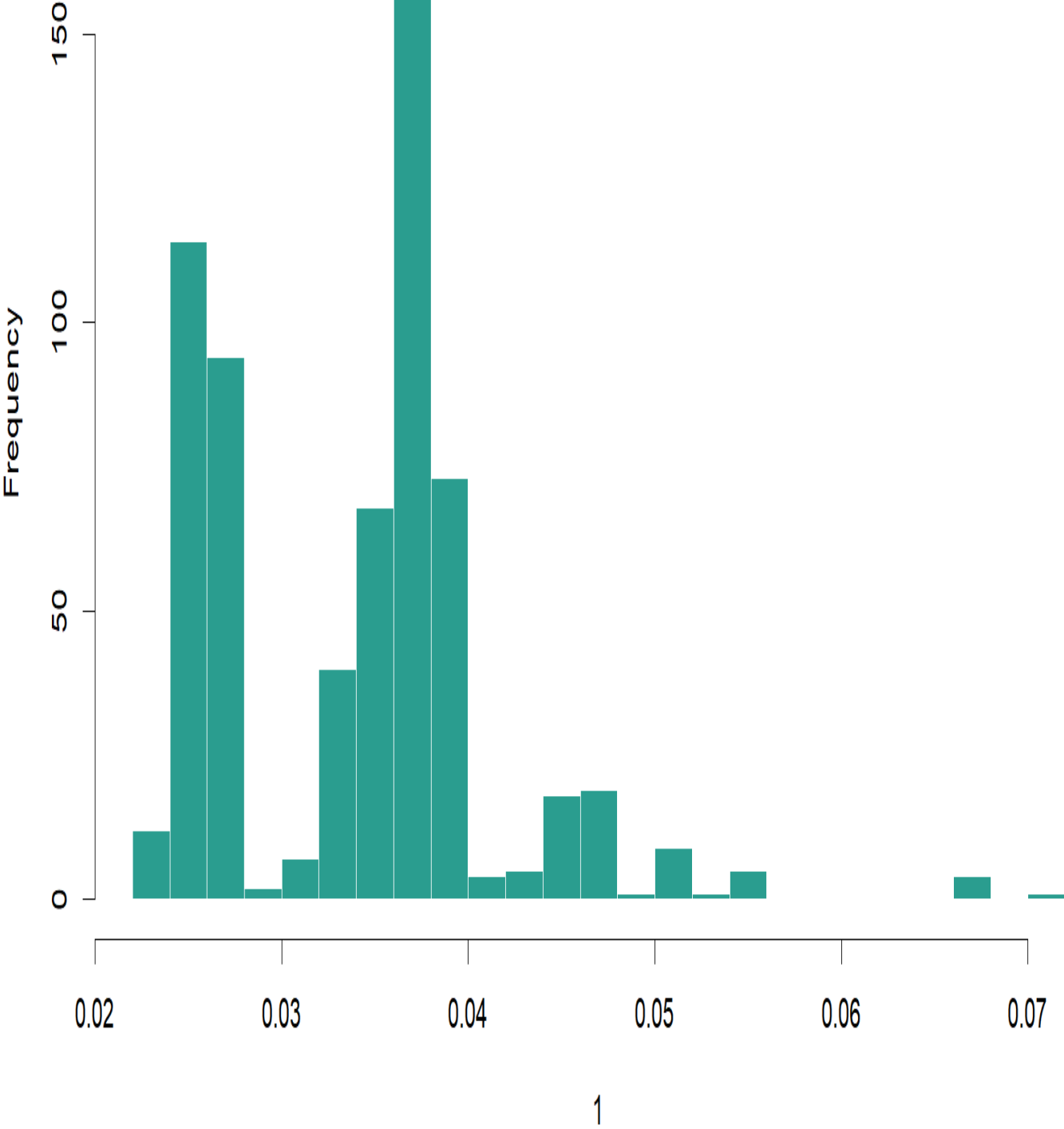
Ordinal Logistic Regression for Likert Data - ordinal model parameters



Ordinal Logistic Regression for Likert Data - outcome frequencies



Ordinal Logistic Regression for Likert Data - predicted probabilities



Ordinal Logistic Regression for Likert Data verified results

