

Survey Analysis in Python

Method: Survey Analysis in Python

Method type: software_workflow

Design: Reproducible pandas/SciPy survey workflow with aligned scale scoring and a fixed-seed nonparametric bootstrap confidence interval.

Variables: famrel, freetime, goout, Dalc, Walc, health

Inference scope: The bootstrap interval estimates uncertainty in the population mean scale score; no unrelated omnibus test is added.

Formula: Park-Miller state=(48271*state) mod 2147483647; resample rows with replacement;

CI=[Q_.025(mean_b),Q_.975(mean_b)].

Source rows: 649

Calculated metrics:

scale_mean: 3.6748844375963

bootstrap_standard_error: 0.0192694806026958

bootstrap_ci_low: 3.63816127375449

bootstrap_ci_high: 3.71263482280431

bootstrap_replications: 2000

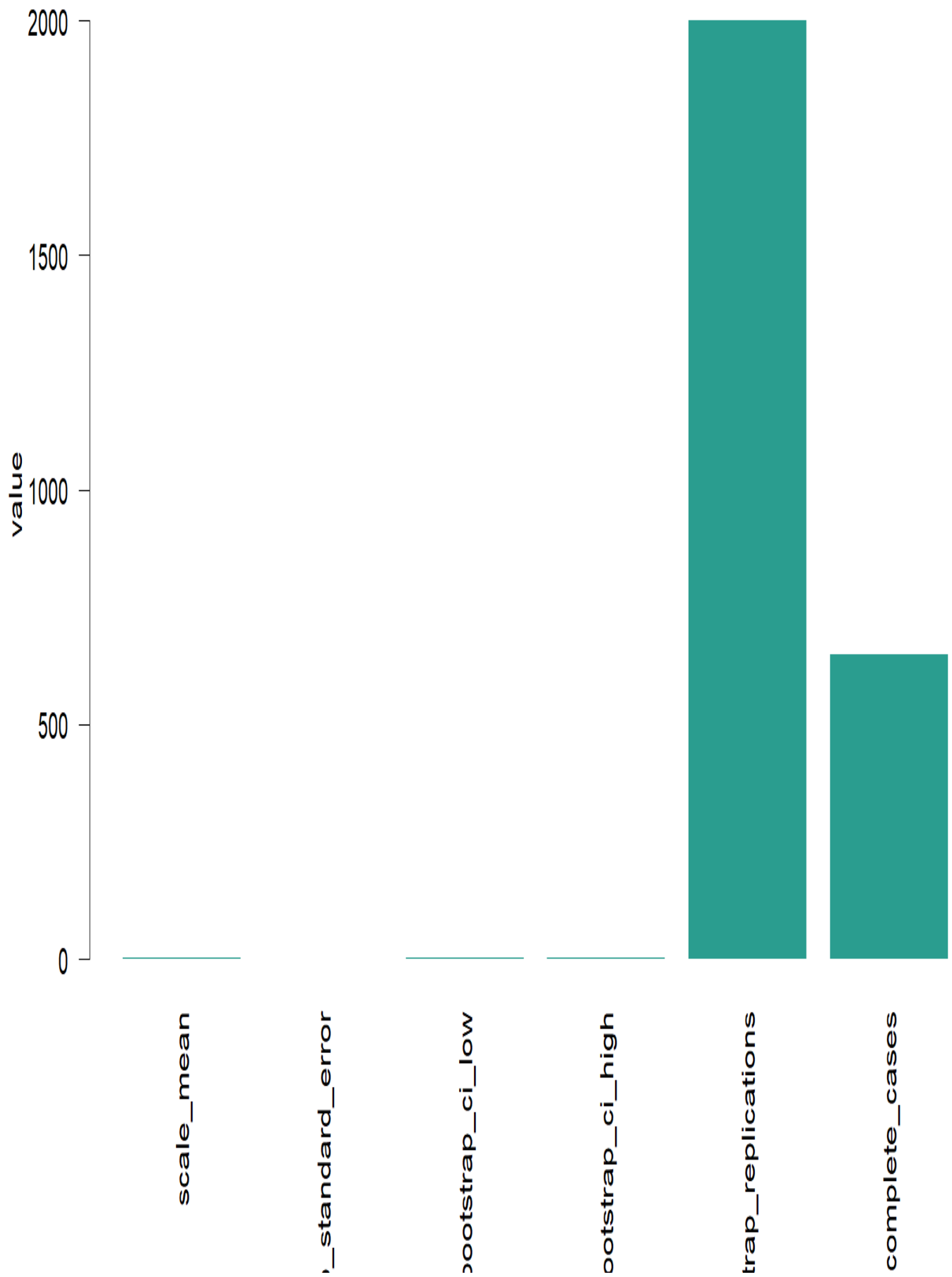
complete_cases: 649

Interpretation:

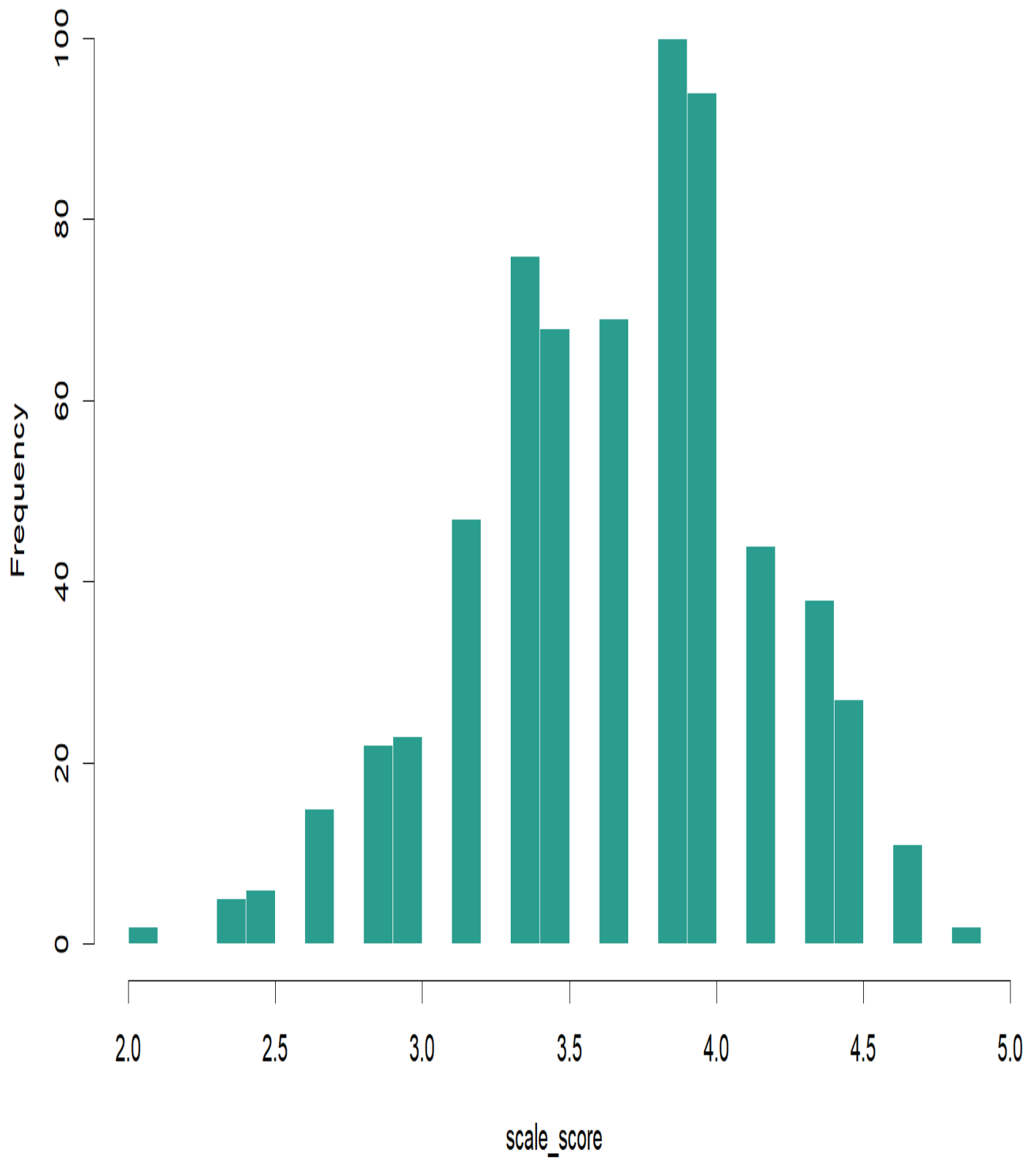
The explicit Park-Miller stream reproduces the same row resamples.

Bootstrap CI 3.63816127375449 3.71263482280431

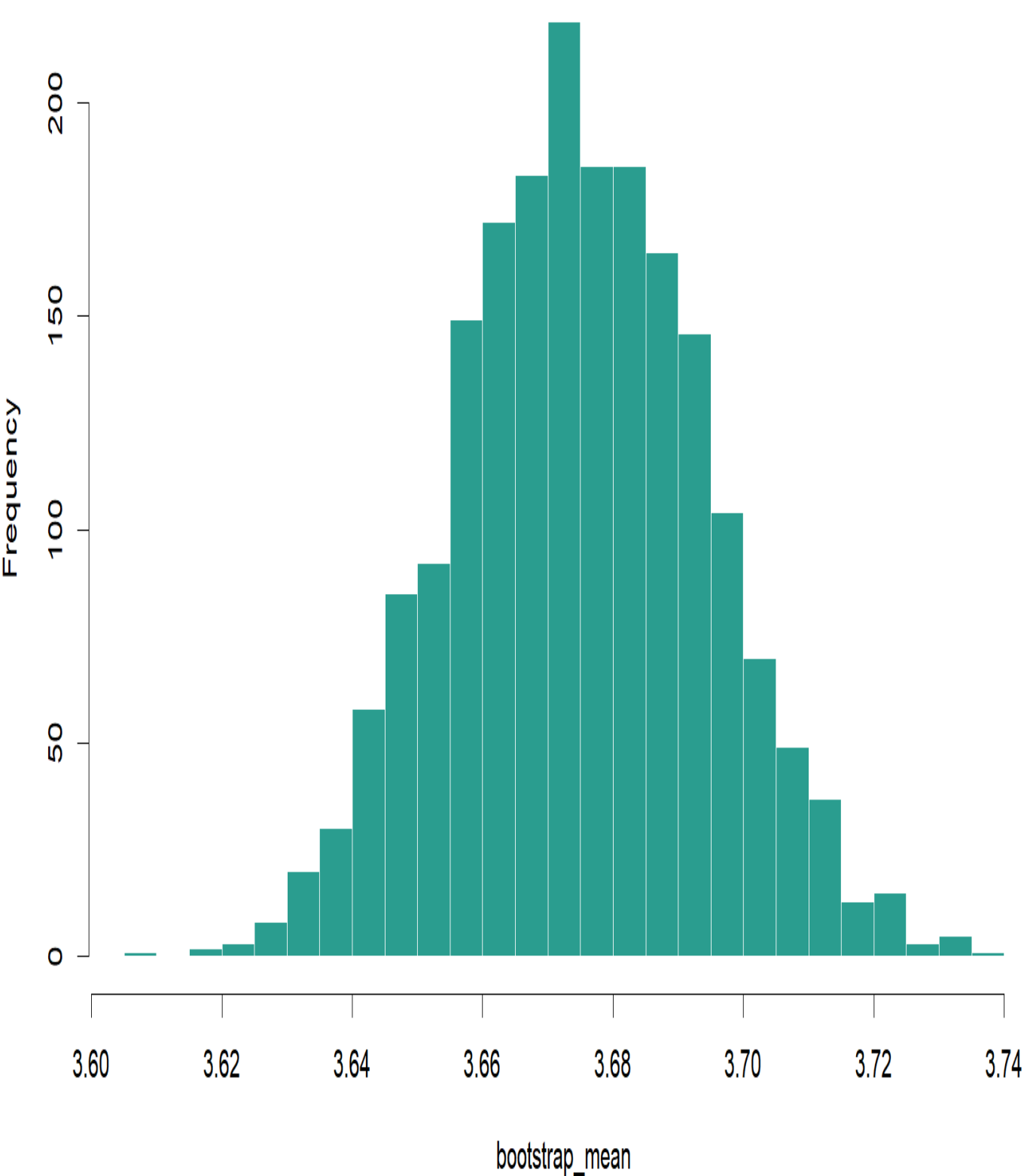
Survey Analysis in Python - primary metrics



Survey Analysis in Python - python scale scores



Survey Analysis in Python - bootstrap distribution



Survey Analysis in Python - bootstrap summary



Survey Analysis in Python verified results

