

Traits & Reasoning Project

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Abstract

Blah blah blah

Background

Scientific Reasoning, **how does it work?**.

The Present Study

The purpose of the present study was to...

Method

Data and Code are available at <https://github.com/syeducation/traits-reasoning>.

Participants and Procedure

The total sample in the current study consists of 199 students enrolled in one of the three STEM-focused colleges at a large public university in the U.S. Midwest (M age = 19, SD = 2.13). Participants were recruited from a list of all first-year students in the three colleges who identified as racial/ethnic minorities. Eligible students were sent a survey link via email and compensated \$25 for their participation.

Measures

Personality Traits. Participants completed the 100-item Big Five Aspect Scale (BFAS), which assesses the big five traits as well as ten aspects. We collected these, but we aren't using them in the current study (despite the title of the project).

Scientific Reasoning. 11-item assessment of scientific reasoning (Cronbach's α = 0.64).

Results

Overall, participant did well on the scientific reasoning task, averaging more correct than incorrect answers, M correct = 0.65, ($SD = 0.22$). However, these results are best examined via tables and figures, so let's look at some.

Here is a table of each item and its rate of success:

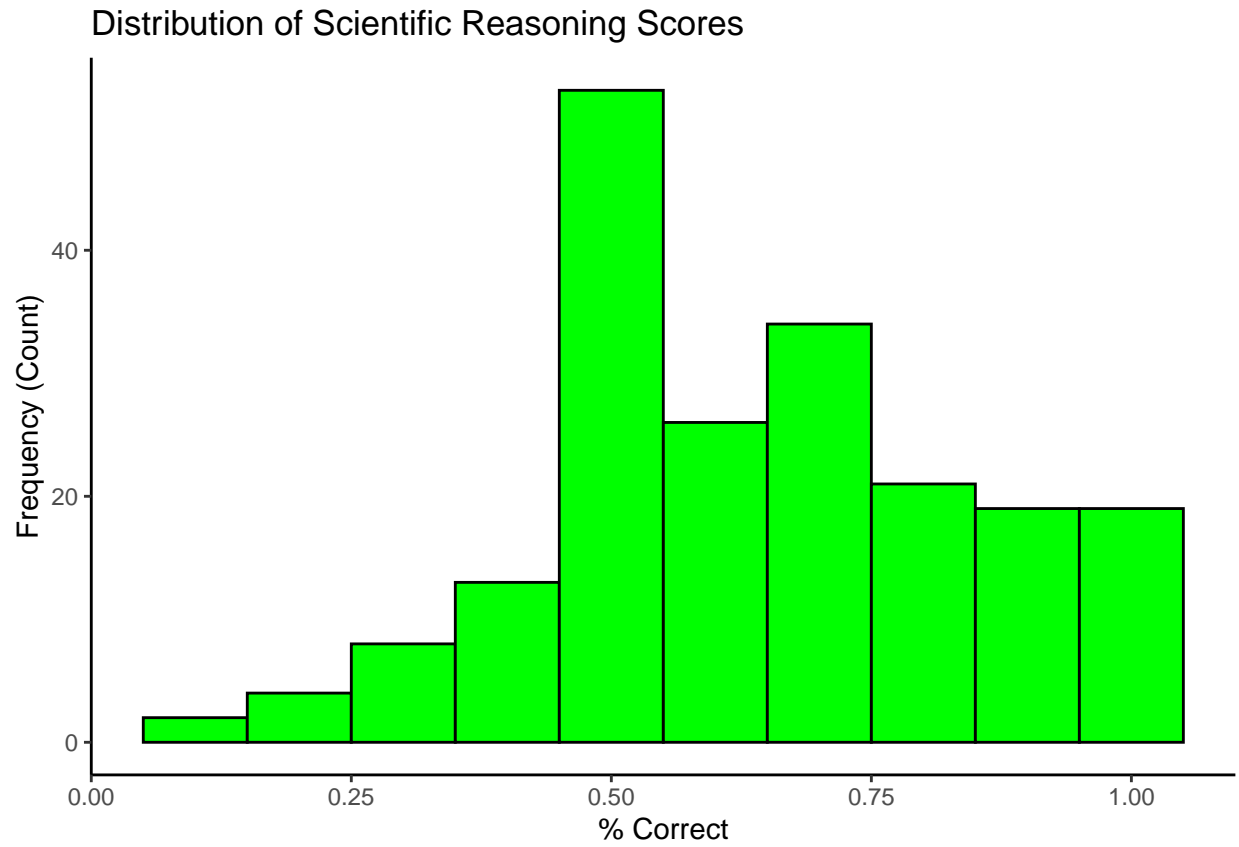
Table 1: Descriptives for SRS scale

Item	Mean	SD
SRS Item 1	0.57	0.50
SRS Item 2	0.59	0.49
SRS Item 3	0.81	0.39
SRS Item 4	0.60	0.49
SRS Item 5	0.78	0.42
SRS Item 6	0.69	0.46
SRS Item 7	0.71	0.45
SRS Item 8	0.61	0.49
SRS Item 9	0.69	0.46
SRS Item 10	0.58	0.49
SRS Item 11	0.49	0.50

It looks like item 11 was the most difficult,

Two researchers are developing a survey to measure consumers' feelings about customer service. Researcher A wants customers to rate their agreement with the statement "I am satisfied with customer service" on a 5-point scale, where 1 = strongly agree and 5 = strongly disagree. Researcher B wants customers to rate customer service on a 5-point scale, where 1 = not dissatisfied at all and 5 = highly dissatisfied. True or False? These questions are equally good for measuring how consumers feel about customer service.

On average, people did pretty well, but you can see there is quite a bit of variability:



Discussion

Overall, it seems that people reason about science, but maybe not as much as we would hope.