



Assignments	24-30
Title	Psychometric scales dataset
Data files	24-30_duckworth-grit-scale-data (1).zip
Sample size	4271
Number of variables	~20 covariates - Many items to be used as responses

This dataset was collected through an on-line personality test. At the end of the personality test, users were asked if their answers were accurate and would be willing to complete an additional survey. At the end of the additional survey users were asked if their answers were accurate and their data could be used for research. This dataset consists of exclusively participants who consented yes at both parts.

This dataset was collected over several pages, the time on each page was recorded:

1. **introelapse**: the time spent on the introduction page to the big five personality test, had an introduction to the big five and a policies statement.
2. **testelapse**: the time spend on the body of the big five personality test
3. **surveyelapse**: the time in seconds spent on the supplemental survey

Technical characteristics:

4. **country** ISO country code
5. **operatingsystem** The operating system of the users computer, determined from HTTP user agent
6. **browser** The browser the user is using, determined from HTTP user agent
7. **screenw** The width of the users screen in pixels, from javascript
8. **screenh** The height of the users screen in pixels, from javascript

Personality test A: big five scales from the international personality item pool.

The following items were rated on a five point scale where 1=Disagree, 3=Neutral, 5=Agree (0=missed).

There are 5 different group of variables measuring different **International Personality Item Pool (IPIP)** personality characteristics (see the attached article for details and file codebook.txt in the attached zip for name descriptions) recorded as

- E1-E10: Extraversion
- N1-N10: Neuroticism
- A1-A10: Agreeableness
- C1-C10: Conscientiousness
- O1-O10: Openness

All were presented on one page in the order E1, N2, A1, C1, O1, E2.....

Then the supplemental survey data were completed (if they agreed to it). Only individuals who opted into the supplemental survey are included in this dataset.

The following items were rated on a five point scale where 1=Very much like me, 2=Mostly like me, 3=Somewhat like me, 4=Not much like me, 5=Not like me at all:

The item text is abbreviated here:

see <https://sites.sas.upenn.edu/duckworth/pages/research> for the full items.

- GS1-GS12

The following items were presented as a check-list and subjects were instructed "In the grid below, check all the words whose definitions you are sure you know":

- VCL1 boat
- VCL2 incoherent
- VCL3 pallid
- VCL4 robot
- VCL5 audible
- VCL6 cuivocal
- VCL7 paucity
- VCL8 epistemology
- VCL9 florted
- VCL10 decide
- VCL11 pastiche
- VCL12 verdid
- VCL13 abysmal
- VCL14 lucid
- VCL15 betray
- VCL16 funny

A value of 1 is checked, 0 means unchecked. The words at VCL6, VCL9, and VCL12 are not real words and can be used as a validity check.

A bunch more questions were then asked:

- **education:** "How much education have you completed?" 1=Less than high school, 2=High school, 3=University degree, 4=Graduate degree
- **urban:** "What type of area did you live when you were a child?" 1=Rural (country side), 2=Suburban, 3=Urban (town, city)
- **gender:** "What is your gender?" 1=Male, 2=Female, 3=Other
- **engnat:** "Is English your native language?" 1=Yes, 2=No
- **age:** "How many years old are you?"
- **hand:** "What hand do you use to write with?" 1=Right, 2=Left, 3=Both

- **religion:** "What is your religion?" 1=Agnostic, 2=Atheist, 3=Buddhist, 4=Christian (Catholic), 5=Christian (Mormon), 6=Christian (Protestant), 7=Christian (Other), 8=Hindu, 9=Jewish, 10=Muslim, 11=Sikh, 12=Other
- **orientation:** "What is your sexual orientation?" 1=Heterosexual, 2=Bisexual, 3=Homosexual, 4=Asexual, 5=Other
- **race:** "What is your race?" 1=Asian, 2=Arab, 3=Black, 4=Indigenous Australian, Native American or White, 5=Other
- **voted:** "Have you voted in a national election in the past year?" 1=Yes, 2=No
- **married:** "What is your marital status?" 1=Never married, 2=Currently married, 3=Previously married
- **familysize:** "Including you, how many children did your mother have?"

NOTE: for the variable race, an error in the programming of the survey left Indigenous Australian, Native American and White responses all registering as the same value.

References for the the IPIP big five scales (Questionnaire A):

- **Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4, 26-42.**
- http://www.sjdm.org/dmidi/Big_Five_Markers.html
- http://ipip.ori.org/New_IPIP-50-item-scale.htm

References for the Duckworth personality scale (Questionnaire B):

- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087-1101.
- <https://upenn.app.box.com/DuckworthPeterson>

ASSIGNMENT 24: Construct a single GS response measurement score by considering the sum of items GS1-GS12. Additionally to this response, use all other variables except the IPIP items in your analysis.

ASSIGNMENT 25: Construct a single Extraversion response measurement score by considering the sum of items E1-E10. Additionally to this response, use all other variables except the IPIP items and Duckworth items (GS1-GS12) in your analysis.

ASSIGNMENT 26: Construct a single Neuroticism response measurement score by considering the sum of items N1-N10. Additionally to this response, use all other variables except the IPIP items and Duckworth items (GS1-GS12) in your analysis.

ASSIGNMENT 27: Construct a simple Agreeableness response measurement score by considering the sum of items A1-A10. Additionally to this response, use all other variables except the IPIP items and Duckworth items (GS1-GS12) in your analysis.

ASSIGNMENT 28: Construct a single Conscientiousness response measurement score by considering the sum of items C1-C10. Additionally to this response, use all other variables except the IPIP items and Duckworth items (GS1-GS12) in your analysis.

ASSIGNMENT 29: Construct a single Openness response measurement score by considering the sum of items O1-O10. Additionally to this response, use all other variables except the IPIP items and Duckworth items (GS1-GS12) in your analysis.

ASSIGNMENT 30: Construct a single Word based response measurement score by considering the sum of **the appropriate** items VCL1-VCL16. Additionally to this response, use all other variables except the IPIP items and Duckworth items (GS1-GS12) in your analysis.

FOR ALL ASSIGNMENTS 24-30

- a) Explore your data. Describe and visualize the most important characteristics of your dataset.
- b) Perform and interpret the appropriate pairwise comparisons.
- c) Fit an appropriate model for the response that corresponds to your model. Interpret the results.