PSYC 640 Grad Stats

Project Workflow

FALL 2024

Reminders/Updates

Assignment 1 is posted – Reverse Results
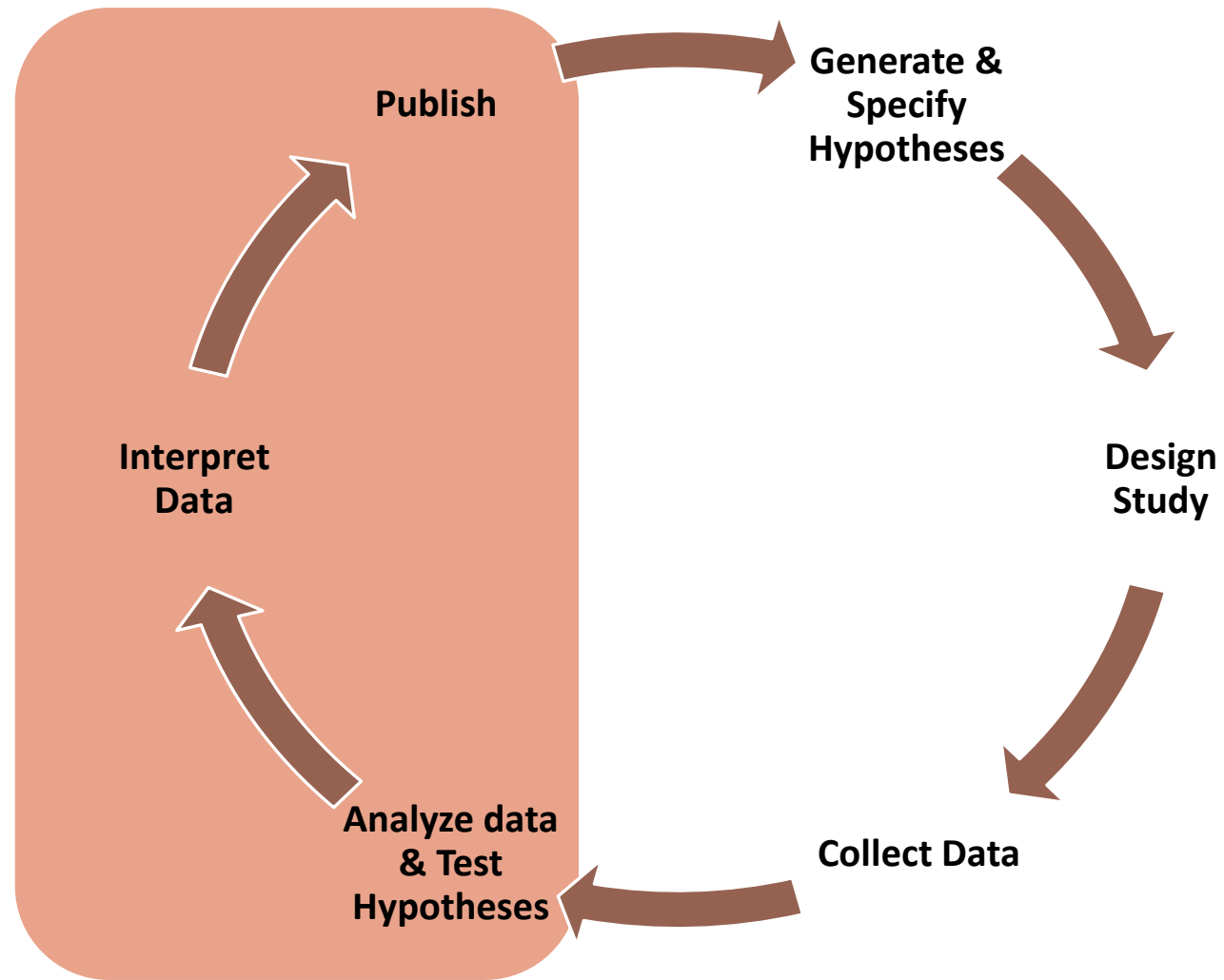
Posting your presentations on website? Privacy

Feedback/Question Box

Overview

Workflow of a manuscript/stats project
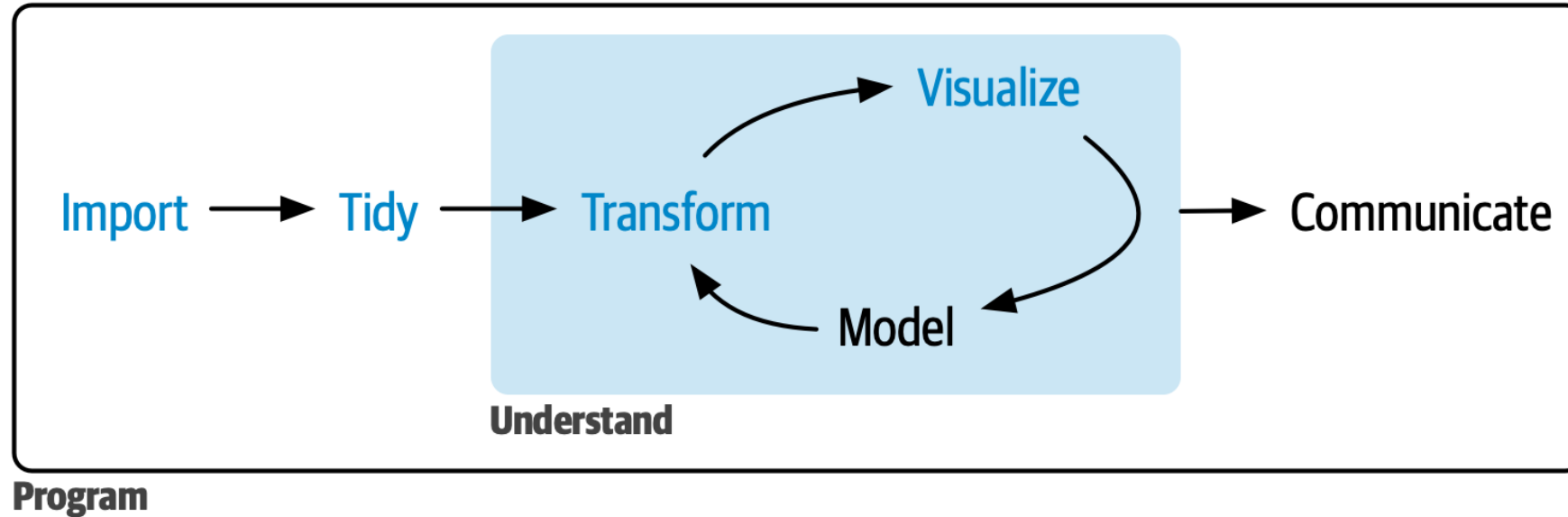- Using R-Projects
- Structure of Rmd documents
- Results Section

Research Design

Research Workflow - Data

3 | RESULTS

3.1 | Preliminary analyses

Table 1 reports descriptive statistics for demographic information, chronotype, and depression measurements for the overall sample, by gender and grade. The mean for chronotype in this sample ($M = 26.87$, $SD = 5.38$) fell within established norms (Carskadon et al., 1993) and was consistent with an intermediate type. The majority of youth were identified as an intermediate type (approximately 79%), with 11% being considered evening type. T-tests showed no significant gender difference for chronotype. Consistent with past work, postpubertal participants showed significantly greater preference toward evening ($t = 3.54$, $d = 0.46$, $P < .001$). There was a significant gender difference for the CDI, with girls reporting higher depression symptoms ($M = 4.50$) compared to boys ($M = 3.49$; $t = 2.3$, $d = .30$ $P = .022$). Over the entire duration of the study, 39.7% of participants experienced at least one episode of depression with girls displaying a marginally significant higher rate of depression diagnoses ($X^2(1) = 3.034$, $P = .082$). Correlations are reported in Table 2. Chronotype was moderately correlated with puberty, age, and depression (measured as a mean score from baseline to 36 months, and as a separate follow-up at 48 months), such that eveningness was associated with postpubertal, older participants, and higher levels of depression.

3.2 | Predicting later chronotype from earlier depression

Depression symptoms exhibited a significant effect upon chronotype such that individuals with higher CDI scores showed a greater preference toward evening ($\beta = -0.347$, $P < .001$, $SE = 0.08$), when controlling for age, gender, and pubertal status. Next, we conducted a linear regression analysis with MESC scores as the dependent variable, earlier depression diagnosis as predictor, with pubertal status, age, and gender as covariates. We found a significant effect of depression diagnosis upon chronotype such that those who had experienced an episode of depression over the 3 years exhibited a greater evening preference ($\beta = -0.13$, $P = .045$, $SE = 0.71$). Upon including depression (CDI or diagnosis) in the regression, the influence of pubertal status is no longer significant. These regression analyses show that earlier

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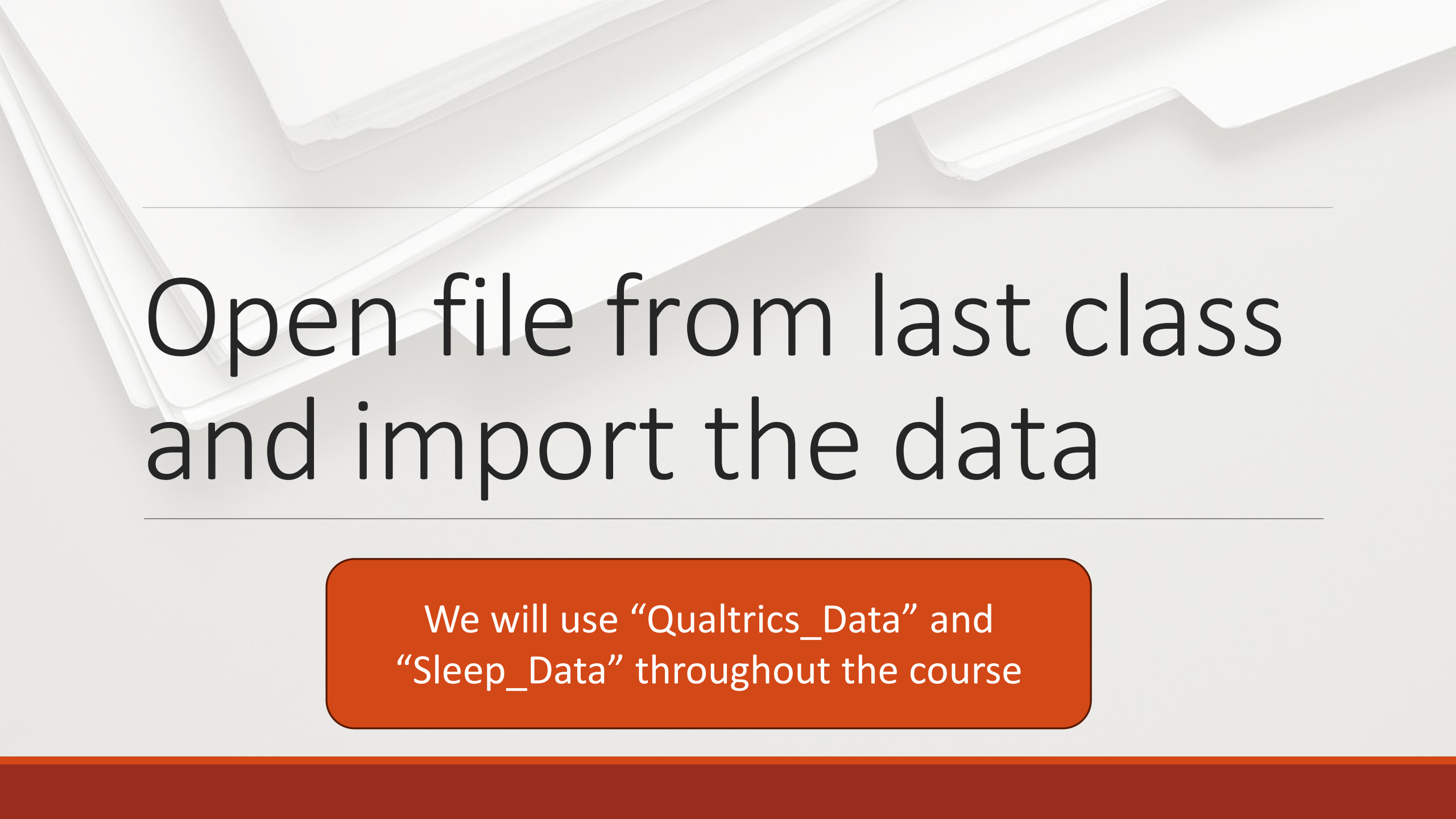
Organization is key

This really is just a formula

You are your own worst collaborator

Open file from last class and import the data

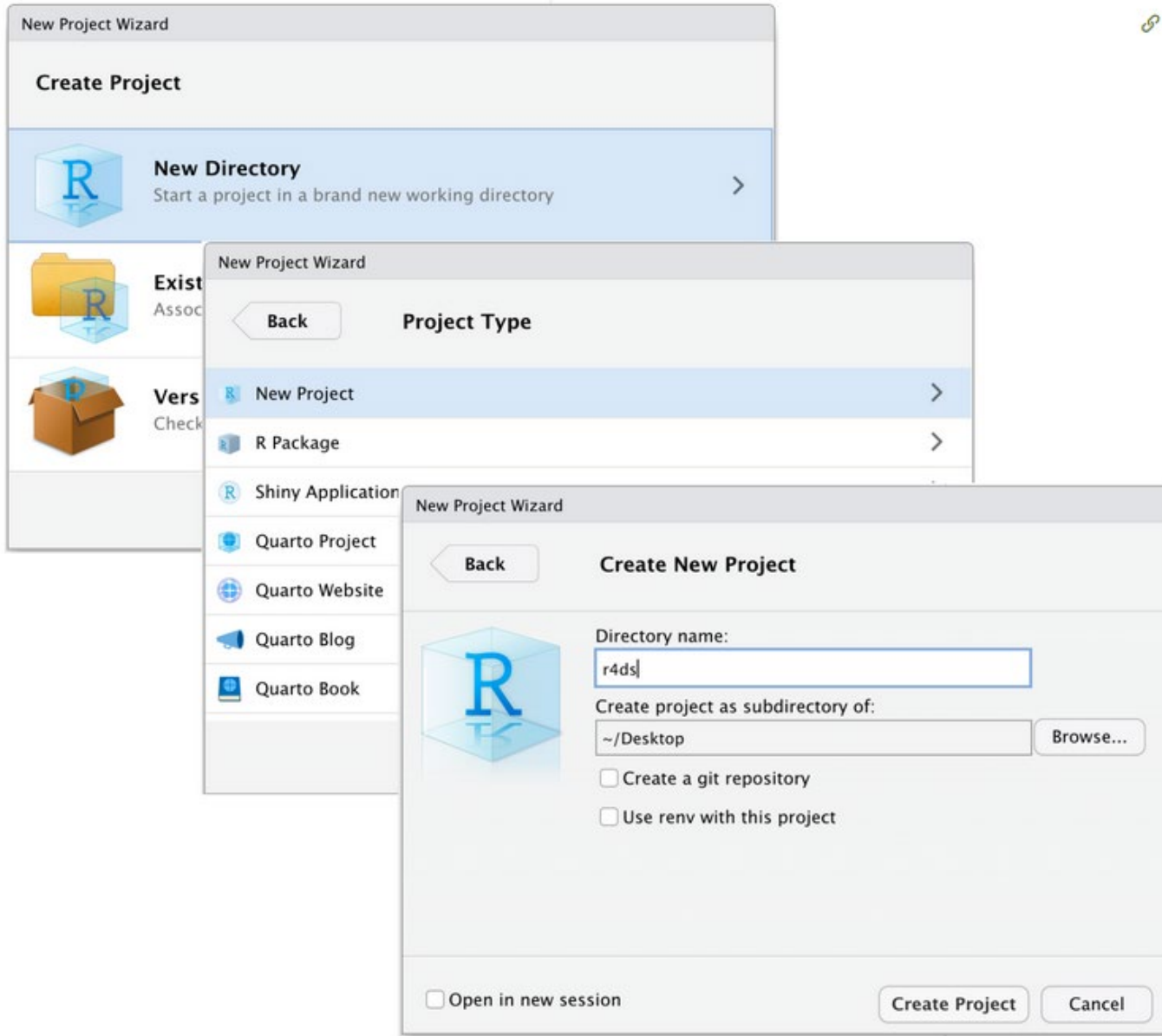We will use "Qualtrics_Data" and "Sleep_Data" throughout the course
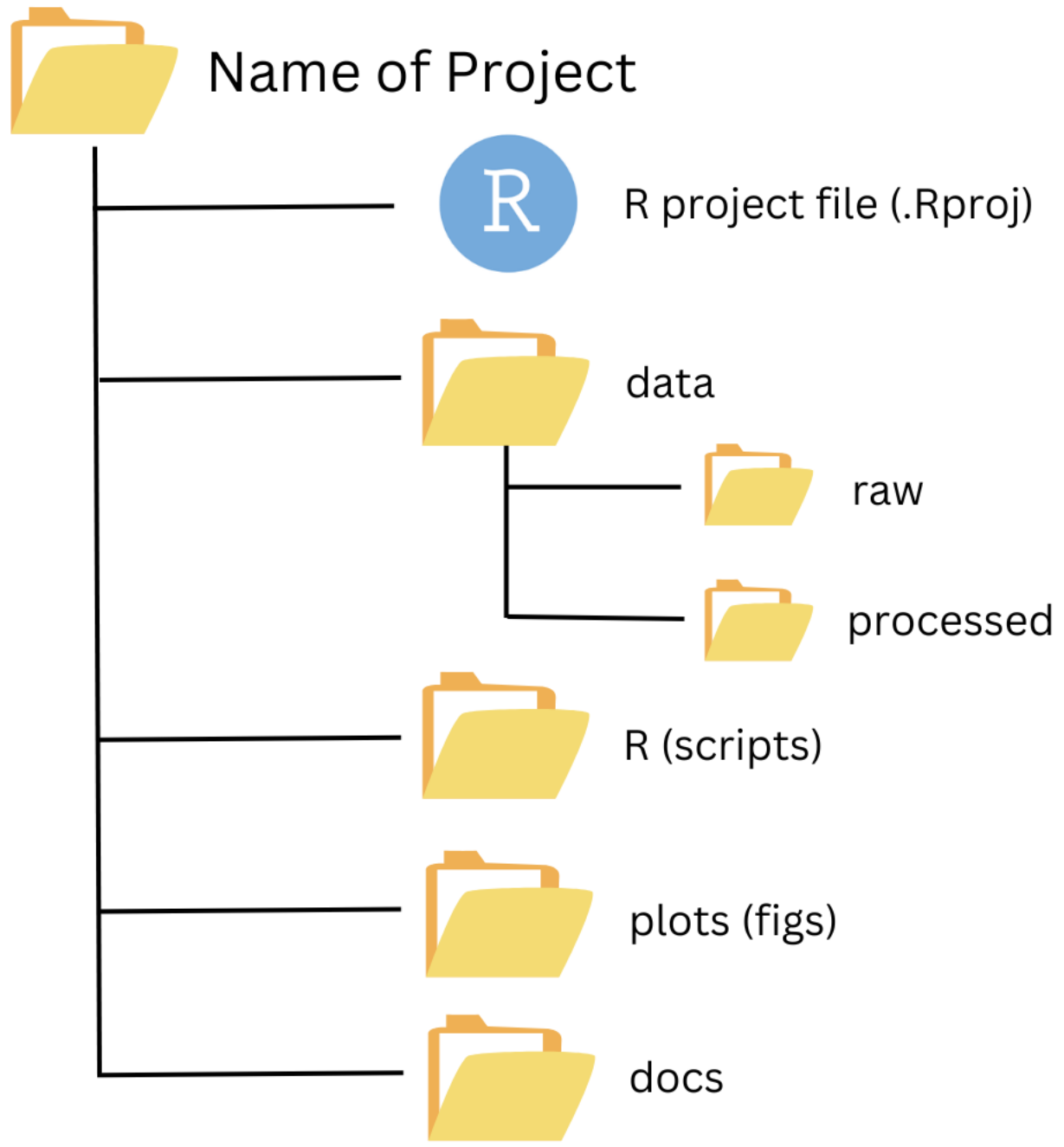
Any Challenges??

Where does your analysis live??
- `getwd()`

Using the R Project - https://r4ds.hadley.nz/workflow-scripts

The Glorious R Project

Name of Project

- R project file (.Rproj)
- data
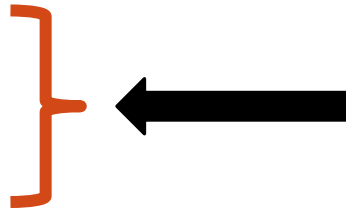 - raw
  - processed
- R (scripts)
- plots (figs)
- docs

Steps to Starting a Project

1. Create a File/Folder
   A. This is your Home Base
   B. Make a Data folder
   C. Make a Document folder
   D. Make a Script folder

These will differ depending on how you like to structure your folders

2. Put your Data in the Data Folder

3. Open RStudio and Create a Project
   A. Make sure it is saved in your Home Base folder

4. Create a Notebook/Markdown file within your folder

Note: You can then share the Home Base folder with anyone who can then run the analyses

Setup the Notebook/Markdown File

Block 1 – Libraries and Data

Text – Short description of what you are doing

Block 2 – Data Wrangling/Visualization

Block 3 – Other stuff/Magic

Pipe Operator

$$\%>\% \quad or \quad |>$$

slice(decorate(bake(mix(ingredients))))

Visualize Your File Path

https://docs.google.com/presentation/d/1MnJClYw2Wi1oclqi_ADUs4HL0FvPQeC8J8W-I-t9CZw/edit?usp=sharing