Our data look like this:

We have 45 participants, a between participants condition with 3 levels (Water *vs.* Single Espresso *vs.* Double Espresso), and Ability as our DV measured on a scale of 1-10.

| | Participant | Condition | Ability |
|---|---|---|---|
| 1 | 1 | Water | 4.817174 |
| 2 | 2 | Water | 5.410972 |
| 3 | 3 | Water | 5.733776 |
| 4 | 4 | Water | 4.361721 |
| 5 | 5 | Water | 5.471650 |
| 6 | 6 | Water | 5.502422 |
| 7 | 7 | Water | 5.070104 |
| 8 | 8 | Water | 5.081347 |
| 9 | 9 | Water | 5.074219 |
| 10 | 10 | Water | 4.943985 |
| 11 | 11 | Water | 5.109123 |
| 12 | 12 | Water | 4.900645 |
| 13 | 13 | Water | 4.989498 |
| 14 | 14 | Water | 5.325784 |
| 15 | 15 | Water | 5.683798 |
| 16 | 16 | Single Espresso | 7.050372 |
| 17 | 17 | Single Espresso | 6.870046 |
| 18 | 18 | Single Espresso | 6.689962 |
| 19 | 19 | Single Espresso | 6.723273 |

Filter

Showing 1 to 20 of 45 entries

# First we need to load the packages we're going to use:

```
library(tidyverse) #load the tidyverse packages
library(psych) #load the psych packages for generating descriptives
library(yarrr) #load yarrr for pirate plots
library(afex) #load afex for running factorial ANOVA
library(DescTools) #load DescTools for calculating effect sizes
library(emmeans) #load emmeans for running pairwise comparisons
```

If you haven't installed a package previously, remember to type
`>install.packages("packagename")`
first.