

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
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(yarr) #load yarr 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.