The Advantage of Simulation

- You can specify the kind of effect size you're interested in looking for - think about what magnitude might be of theoretical importance - and then model different sample sizes to determine (roughly) how many observations you might need to have a reasonable chance of detecting the effect (assuming it is there).

- Data simulation can be used to motivate pre-registered analysis plans (e.g., on OSF).

- Wouldn't it be handy if we could easily change our sample size parameter without having to dig around in our code?

Writing Functions in R

- As a general rule of thumb, if you ever want to run the same code more than once (but with different parameter values) you might want to consider turning the code into a function…

- Most of the commands you use in R are actually functions. A function takes a set of inputs, and produces an output.

- On the following slide I have taken the code I wrote to sample from the standard normal distribution and have turned it into a function which takes as its input the sample size you want to simulate.