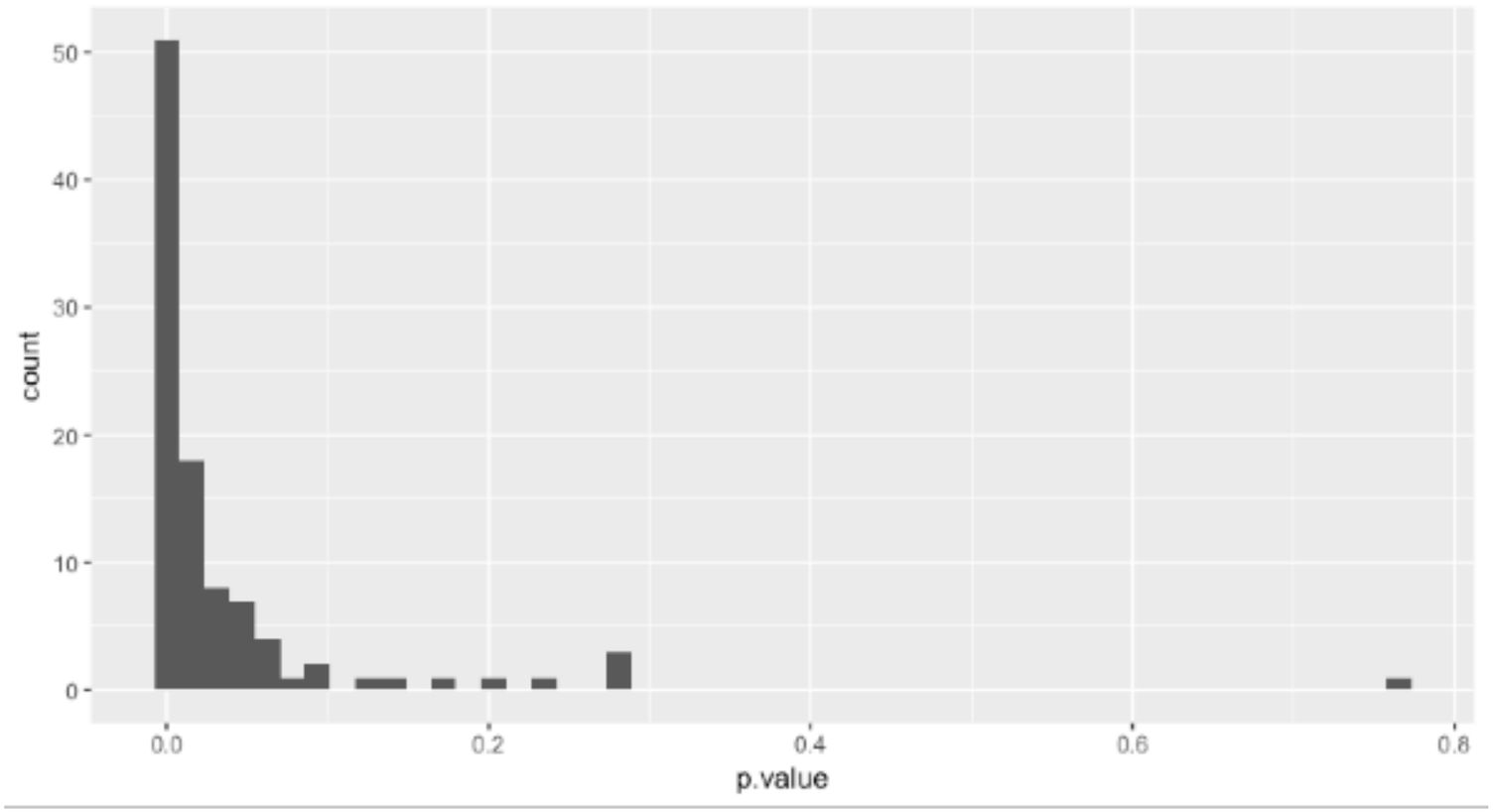
- We actually need 200(!) participants to give us 80% power for a Cohen's d = .4

- Let's run the 100 simulations again but this time we'll set sample size to 200 - here's the histogram of the p-values - 80 of the t-tests are now significant at < .05:




```
> count(filter(result, p.value < .05))
# A tibble: 1 x 1
      n
  <int>
1    80
```

- If we zoom in and look at p-values < .05 we'll see lots of tiny ones - this is what we would expect to see in the literature but instead analysis has shown more p-values at the threshold of significance (i.e, just below .05) than we would expect - suggests possible p-hacking and other QRPs.

- Nathan C. Leggett, Nicole A. Thomas, Tobias Loetscher & Michael E. R. Nicholls (2013). The life of p: "Just significant" results are on the rise. *The Quarterly Journal of Experimental Psychology, 66,* 2303-2309. http://dx.doi.org/10.1080/17470218.2013.863371