

Extra chart for Colada[39]. Never a good idea to subtract baseline

Like the first chart in the post this figure computes the impact on power of taking into account baseline measures, as a function of the test-retest reliability (x-axis) of that measure. It expresses the resulting power, from taking baseline into account, in terms of the sample size equivalent ignoring baseline.

For example, if a test has r = 0 test-retest reliability, subtracting baseline lowers power by an amount equivalent to lowering sample size from n=20 to n=11. Controlling for baseline leaves power unchanged (n=20).

If r = .5 subtracting baseline leaves power unchanged, n=20, controlling for baseline increases power in an amount equivalent to running n=26 instead of n=20.

R Code behind chart: http://opim.wharton.upenn.edu/~uws/BlogAppendix/Colada39