

Four magic points







(How to make the reviewers happier)

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- ① **Check (and show) the data distribution.** The chosen statistic-test depends on data distribution. For example: ANOVA tests require normal distribution (Reaction times are not...).
- ② **Means comparison.** When presenting means you must report and consider even variability; statistical significance depends on variability.
- ③ **Multiple comparisons.** When performing many tests you must adjust probabilities; the higher the number of test (without control) the higher the probability to find statistical significance.
- ④ **Effect size.** APA style requires to report effect size (and comment it). Careful to the sample size because with *appropriate* sample size, everything is significant.

Suggested papers to read:

-  Francis, G. (2013). Replication, statistical consistency, and publication bias. *Journal of Mathematical Psychology*, 57, 152-169.
-  Gelman, A. (2012). P-values and statistical practice. *Epidemiology*, 24, 69-72.
-  Ioannidis, J. (2005). Why most published research findings are false. *PLOS Medicine*, 2, e124.
-  Johnson, V. E. (2013). Revised standards for statistical evidence. *PNAS*, 110, 19175-19176.
-  Simmons, J. P., Nelson, L. D., and Simonsohn, U. (2011). False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant. *Psychological Science*, 22, 1359-1366.
-  Wagenmakers, E. J., Weetzels, R., Borsboom, D., and van der Maas, H. (2011). Why psychologists must change the way they analyze their data: The case of psi. *Journal of Personality and Social Psychology*, 100, 426-432.

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