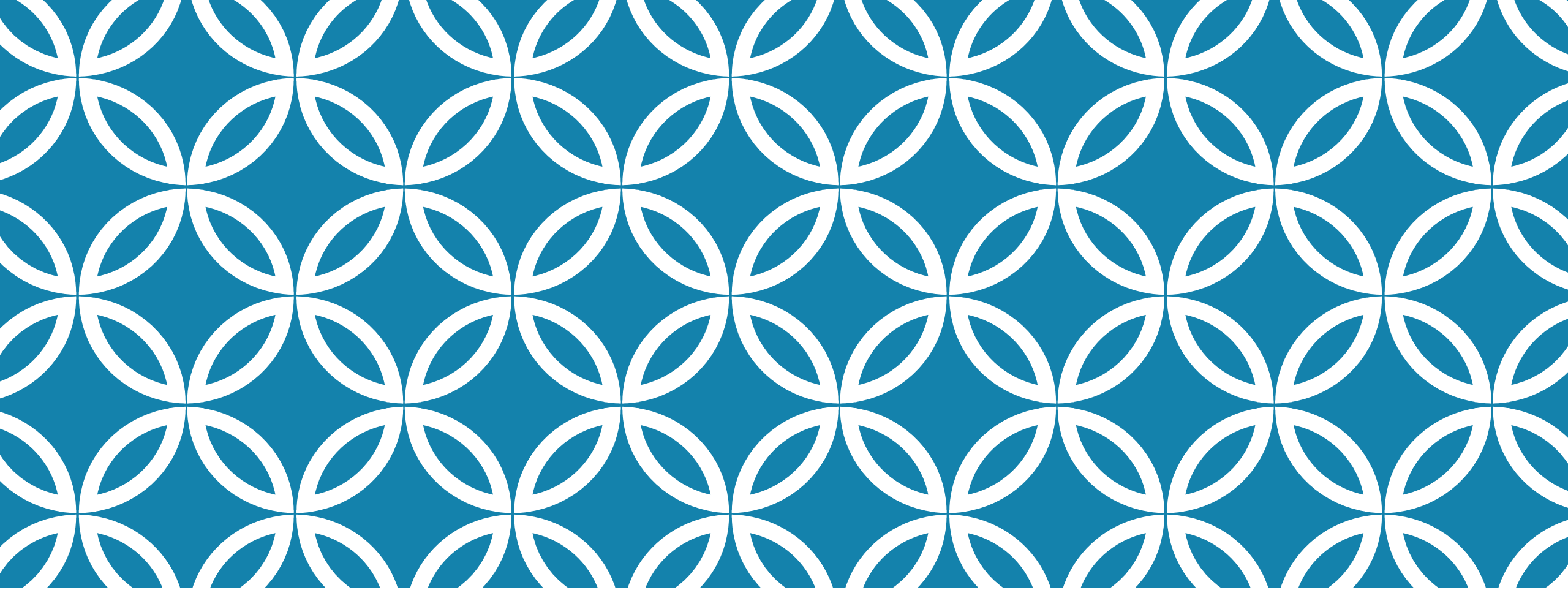


HOW TO PRESENT STATISTICAL RESULTS

Ágoston Török @ ELTE

Multivariate statistics

MOTIVATION FOR PRESENTING THEM IN A STANDARD WAY

Ideally we expect our work to be read by anyone from any field

These notations are standards

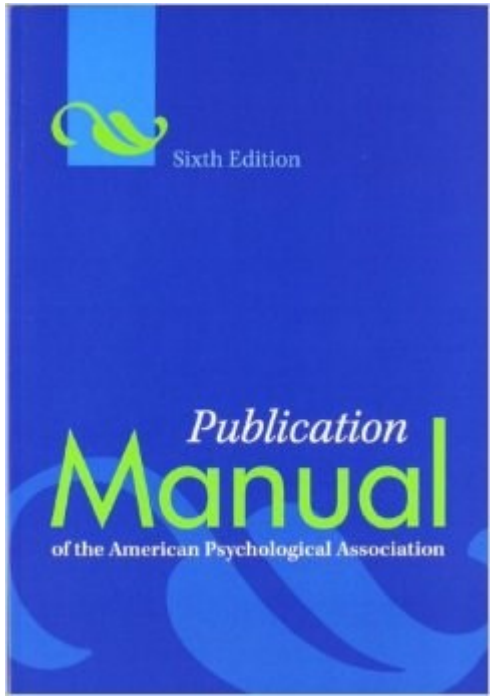
It takes less time to read a paper if you know what are you looking at

(e.g. ~~szig~~ -> *p*)

Facilitates metaanalysis

WHAT IS THE STANDARD WAY?

http://www.apastyle.org/manual/?apaSessionKey=WWJQnDVxwiSRN7mAYq9mUdwG



BOLD, ITALICS, GREEK, SYMBOLS

boldface for vectors and matrices: **V,** $\sum$

Use *italics* for statistical symbols: *t, F, N, p*

Uppercase *N* is the number of participants in the total sample: $N = 328$

Use an italicized, lowercase n in reference to only a portion of the sample: $n = 42$

Use hat for predicted values: $\bar{y}$

Greek letters should not be italicised: Ω

PARENTHESES & BRACKETS

Use parentheses to enclose degrees of freedom:

$t(45) = 4.35$

$F(3, 87) = 9.11$

Use brackets for confidence intervals:

95% CIs [3.45, 2.7] and [-7.23, 1.89]

ROUNDING

$n \in R$	
n > 100	nearest whole number (e.g., M = 6254)
10 < n < 100 | (10,100)	report to one decimal place (e.g., M = 23.4)
0.1 < n < 10	For numbers between 0.10 and 10, report to two decimal places (e.g., M = 4.34, SD = 0.93)
n < 0.1	report to three decimal places, or however many digits you need to have a non-zero number (e.g., M = 0.014, SEM = 0.0004).

DECIMALS

- If n can only be a whole number then don't report it with decimals. E.g., the number of participants in a study should be reported as N = 5, not N = 5.0.
- Report exact p-values (not $p < .05$), even for non-significant results. If the software you use reports a p-value of .000; then report $p < .001$.
- Two-tailed p-values are assumed. If you are reporting a one-tailed p-value, you must declare it.
- No leading zero for values (-1,1), such as *p*-values, correlation coefficients (*r*), partial eta-squared (ηp 2) (e.g., p = .043).

DESCRIPTIVES

Mean and **Standard Deviation** are most clearly presented in parentheses:

The sample as a whole was relatively young (*M* = 19.22, *SD* = 3.45).
The average age of students was 19.22 years (*SD* = 3.45).

Percentages are also most clearly displayed in parentheses with no decimal places:

Nearly half (49%) of the sample was married.

EQUAL SIGNS

There should be a space before and after the

=

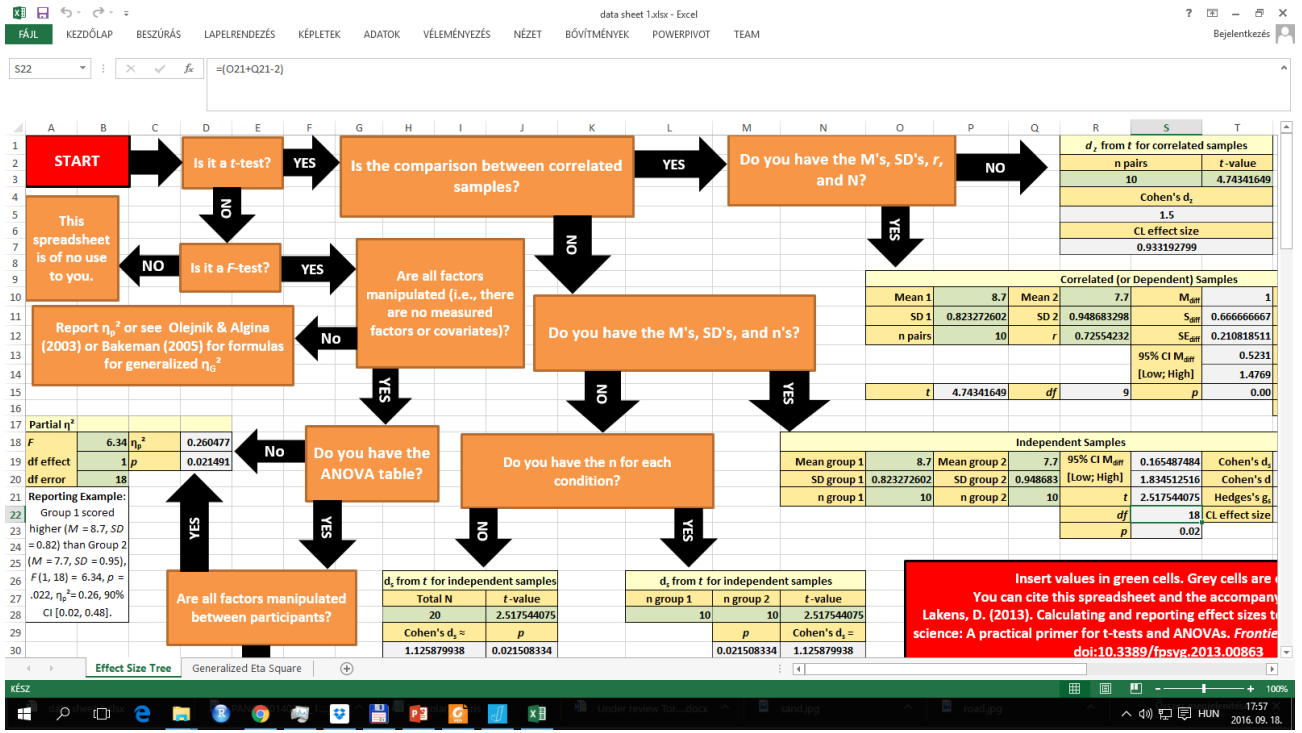
>

<

Etc.

IMPORTANCE OF EFFECT SIZES

Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. Frontiers in psychology, 4, 863.



NON-PARAMETRIC TESTS

Do not report means and standard deviations for non-parametric tests. Report the median and range in the text or in a table. (Mann-Whitney, Wilcoxon rank test)