

American Statistical Association releases statement on statistical significance and p-values

March 7 2016

The American Statistical Association (ASA) has released a "Statement on Statistical Significance and P-Values" with [six principles underlying the proper use and interpretation of the p-value](#). The ASA releases this guidance on p-values to improve the conduct and interpretation of quantitative science and inform the growing emphasis on reproducibility of science research. The statement also notes that the increased quantification of scientific research and a proliferation of large, complex data sets has expanded the scope for statistics and the importance of appropriately chosen techniques, properly conducted analyses, and correct interpretation.

Good statistical practice is an essential component of good scientific practice, the statement observes, and such practice "emphasizes principles of good study design and conduct, a variety of numerical and graphical summaries of data, understanding of the phenomenon under study, [interpretation](#) of results in context, complete reporting and proper logical and quantitative understanding of what data summaries mean."

"The p-value was never intended to be a substitute for scientific reasoning," said Ron Wasserstein, the ASA's executive director. "Well-reasoned statistical arguments contain much more than the value of a single number and whether that number exceeds an arbitrary threshold. The ASA statement is intended to steer research into a 'post p

Citation: American Statistical Association releases statement on statistical significance and p-values (2016, March 7) retrieved 18 April 2024 from <https://phys.org/news/2016-03-american-statistical-association-statement-significance.html>

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