

Improving the visual interpretation of experimental data by a more informative display of confidence intervals

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The clear and effective communication of information is of paramount importance in science. Commonly, experimental results are depicted in figures, and the observed values (such as means, for example) are frequently accompanied by bars. These bars sometimes reflect standard error of the mean (SEM), standard deviation (SD), or a confidence interval (CI). Their visual interpretation, however, is far from being trivial, particularly in more complex study designs [1]. A clear and effective visual representation is therefore challenging [2,3]. Here, we discuss the involved problems and argue against displaying SEM bars because they easily invite misinterpretations. We recommend displaying adjusted confidence intervals in figures.

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