

# Study: Psych statistics might be improving

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Australian researchers say efforts to advocate improved statistical practices in psychological research might be succeeding.

Geoff Cumming, Fiona Fidler and colleagues at La Trobe University in Melbourne sought to examine whether guidelines created in 1999 by the American Psychological Association had been implemented in psychological research.

The authors analyzed articles from 10 leading international psychology journals from 1998 to 2006, focusing on three practices central to the statistical reform debate: Null hypothesis significance testing, confidence intervals and figures with error bars.

While the study suggests psychologists still rely on traditional null hypothesis significance testing, the research also showed psychologists are also using considerably more graphs with error bars to report their research.

According to the authors, the shift toward using graphs with error bars signals a step forward in data interpretation. "Error bars," says Fidler, "can give a clear impression of a study's precision and lead to better conclusions."

Cumming and Fidler insist changes in statistical practices in psychological research are needed for researchers, and readers of journal articles, to have a more accurate understanding of experimental results.

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