|  |  |
| --- | --- |
| SPORTSCIENCE · sportsci.org | Latest issue |
| News & Comment / In Brief | This issue |

|  |
| --- |
| * [P Values vs Magnitude-based Inference](#pVsMBI): All new slideshow.
* [Journal Impact Factors 2017](#impactfactors): Values from the Scopus database.

[Reprint pdf](file:///C%3A%5CUsers%5Ce5104725%5CAppData%5CRoaming%5CMicrosoft%5CWord%5Cinbrief.pdf) · [Reprint docx](file:///C%3A%5CUsers%5Ce5104725%5CAppData%5CRoaming%5CMicrosoft%5CWord%5Cinbrief.docx) |

## P Values vs Magnitude-based Inference

**Will G Hopkins**, Institute of Sport Exercise and Active Living, Victoria University, Melbourne, Australia. **Email**. Reviewer: Alan M Batterham, School of Health and Social Care, University of Teesside, Middlesbrough, UK. Sportscience 21, i, 2017 (sportsci.org/2017/inbrief.htm#pVsMBI). Published May 2017. [©2017](file:///D%3A%5CWill%27s%20Documents%5Csportsci%5Ccopyright.html).

**Update Nov 2020**. The [ECSS report](../2020/ECSSsport.htm) in the [2020 issue](../2020/index.html) explains how statistical significance and non-significance represent misleading evidence for effect magnitudes. I also gave a 10-min talk at the conference on the frequentist and Bayesian theoretical bases for magnitude-based decisions. The video is available on YouTube [here](https://youtu.be/VuYkATYhoJI). A slides-only pptx version of the talk (including a description of error rates) is available [here](MBD_Bayesian_Frequentist_%26_errors.pptx).

**Update Feb 2020**. The [2020 issue](../2020/index.html) contains an [article](../2020/MBDtests.htm) and [slideshow](../2020/MBD%20as%20hypothesis%20tests.pptx) on hypothesis tests underlying magnitude-based decisions, and there is an [In-brief item](../2020/inbrief.htm) describing the recent history of magnitude-based inference and decisions, as well as a shorter, simpler explanation of the hypothesis tests.

**Update Feb 2019**. The attack on magnitude-based inference (MBI) in 2018 is documented in [The Vindication of Magnitude-Base Inference](../2018/mbivind.htm) and in the [post-publications comments](../2018/CommentsOnMBI/MBIcomments.htm), where you will also find [a slideshow](../2018/CommentsOnMBI/MBI%20pValues%20AttackOnMBI%20MBIerrors.pptx) summarizing the attack and how MBI works. Rebranding MBI as magnitude-based decisions (MBD) is explained in an [In-brief item](../2019/inbrief.htm) in the 2019 issue.

A [slideshow](PvaluesDownButNotYetOut.pptx) explaining p values, magnitude-based inference (MBI), and the American Statistical Association's [policy statement](http://amstat.tandfonline.com/doi/abs/10.1080/00031305.2016.1154108) on p values is now available. The slideshow has the title of the In-brief item in last year's Sportscience, [P Values Down But Not Yet Out](../2016/inbrief.htm#Pout), and it represents an elaboration of that item. The [slideshow](PvaluesDownButNotYetOut.pptx) was presented at the [8th International Conference on Kinesiology](https://www.kif.unizg.hr/conference.kinesiology) in Opatija, Croatia, May 10-14, 2017 and at various workshops subsequently.

### Other resources on statistical inference

A one-hour lecture on [data analysis and interpretation](../2013/inbrief.htm#analysis) has an earlier summary of null-hypothesis testing and MBI.

The [article](../2007/wghinf.htm) describing the [spreadsheet to derive MBI from a p value](../resource/stats/xcl.xls) has a detailed explanation of clinical and non-clinical MBI. To derive MBI from a confidence interval use the [spreadsheet to combine/compare effects](../resource/stats/xCombineGroups.xls) (and read the accompanying [article](../2006/wghcom.htm)).

The first peer-reviewed [article on MBI](../jour/05/ambwgh.htm) published here and in *International Journal of Sports Physiology and Performance* deals only with non-clinical inference.

The [article on progressive statistics](../2009/prostats.htm) published here and in *Medicine and Science in Sports and Exercise* has a summary of MBI and much, much more.

## Journal Impact Factors 2017

**Will G Hopkins**, Institute of Sport Exercise and Active Living, Victoria University, Melbourne, Australia. **Email**. Sportscience 21, i, 2017 (sportsci.org/2017/inbrief.htm#impactfactors. Published September 2017. [©2017](file:///D%3A%5CWill%27s%20Documents%5Csportsci%5Ccopyright.html)

Download the [workbook (28 KB) of impact factors](http://www.sportsci.org/2017/ImpactFactors2016.xlsx).

As noted in [a 2015 article](file:///C%3A%5CUsers%5Ce5104725%5CAppData%5CRoaming%5CMicrosoft%5C2015%5Cwghif.htm), I have abandoned Thomson-Reuters' impact factors in favor of Elsevier's, which are derived from a bibliographic database (Scopus) more relevant to sport and exercise science, and which are freely available in a very large workbook (33 MB) at [Journal Metrics](https://journalmetrics.scopus.com/). Elsevier refers to the impact factor as the *CiteScore*, but it is calculated in the same manner as the traditional impact factor. I have extracted the values for our journals into a user-friendly small [workbook](file:///C%3A%5CUsers%5Ce5104725%5CAppData%5CRoaming%5CMicrosoft%5CWord%5CImpactFactors2016.xlsx) (28 KB), which has spreadsheets sorted by journal title and by 2016 impact factor. As of last year I will not be writing a full article on the impact factors.

———–