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In Response to Frane, "Errors in a Program for Approximating Confidence Intervals"

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In Response to Frane

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A rebuttal to Frane's letter to the Editor in this issue.

Letter to the Editor

Frane (2017) disagreed with my interpretation of Bird (2002), suggesting I overlooked Bird's (2002) important assertion that "exact standardized intervals should be preferred to approximate standardized intervals whenever both are available" (p. 204). The ensuing sentence from Bird (2002) should be stated, because it is effective for full contextual purposes: "It is often necessary, therefore, to rely on approximate (classic) intervals for inferences about standardized effect sizes" (p. 204). A personal, research perspective is important, as is taking stock in this assertion from Bird (2002), which utilized, "In general, approximate and exact standardized intervals are likely to lead to similar (often indistinguishable) interpretations of effect sizes (p. 204)." Frane (2017) suggested the entirety of this idea was qualified under the pretext of heuristically speaking, but it is not clear how this could be known.

To be sure, there was full comprehension of Bird (2002), but exact confidence intervals (CIs) were not the intent of Walker (2015). This was obvious even with Frane's (2017) example and R code, because it "uses a standard iterative procedure to compute 'exact' confidence intervals for the standardized effect size". However, one of the main objectives, stated in the first sentence of Walker (2015), was to afford code in SPSS, not R. Moreover, as stated in Walker (2015) at numerous locations and with support from literature, "The program's estimated CI formula is based on previous research." The operative word was estimated and similar synonyms, such as approximate, but not, as Frane (2017) would have it, "exact."

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IN RESPONSE (FRANE, 2017)

Wrangling about the peculiarities of a program that a user might not be advocating in favor of alternative programs remains a personal choice. It should not, however, rise to a level warranting description as a fundamental flaw, obsolete, or an incorrect implementation. Frane (2017) claimed the program in Walker (2015) does not provide exact confidence intervals. Precisely. Exact CIs were not discussed in Walker (2015), because they did not comport with the purpose of the article.

References

Bird, K. D. (2002). Confidence intervals for effect sizes in analysis of variance. *Educational and Psychological Measurement*, 62(2), 197-226. doi: 10.1177/0013164402062002001

Frane, A. V. (2017). Errors in a program for approximating confidence intervals (Letter to the Editor). *Journal of Modern Applied Statistical Methods*, *16*(1), pp.-pp. doi: 10.22237/jmasm/1493599320

Walker, D. A. (2015). Two group program for Cohen's d, Hedges' g, η^2 , R_{adj}^2 , ω^2 , ε^2 , confidence intervals, and power. *Journal of Modern Applied Statistical Methods*, 14(2), 282-292. Retrieved from http://digitalcommons.wayne.edu/cgi/viewcontent.cgi?article=2086&context=jma sm