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Erratum

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Problem

The central hypothesis of the paper is that using Cohen's thresholds developed for ESp (ESp=effect size based on the pooled SD) for interpretation of a standardized response mean (SRM=effect sized based on the SD of the change scores) may lead to overestimation or underestimation of effect. The term 'effect' concerns both intervention-related change over time and the magnitude of a difference between treatment and control groups.

Although the representation of the recursive association between both effect sizes was correctly represented in Figure 1, we have used the transformation formula in the reverse direction in addressing the 'one-sided' hypothesis that SRM should be transformed into ESp for correct effect estimation. Therefore, the following text part is false as it does not concern the conversion of the SRM=into the ESp (in order to allow utilizing Cohen's thresholds) but the conversion of ESp into an SRM (which simply proves that the formula is mathematically correct).

Text parts that need to be replaced are in normal font, text that need no correction and new text is written in italics.

The following section should be removed:

"However, an SRM of 0.20 must be tagged as trivial effect as long as the correlation coefficient ranges from ***r***=0.01 to ***r***=0.49. With large corresponding correlation coefficients (**r**=0.92) a small SRM of 0.20 must be tagged as moderate (0.20/√2/√1–0.92)=0.50) or (**r**=0.97) large (0.20/√2/√1–0.97)=0.80). The class midpoint 0.35 of the 'small effect' range of effect (not depicted) has to be classified as moderate or large effect with correlation coefficients of 0.76 (0.35/√2/√1–0.76=0.50) and 0.91 (0.35/√2/√1–0.91=0.80), respectively. SRMs of 0.80 has to be tagged as 'moderate' effect (ES=0.58–0.79) if the correlation ranges from ***r***=0.01 to 0.49. The SRM ≥0.80 cannot drop below the cut-off points of small and trivial ES due to the correlation magnitude between baseline and outcome measurements. 'Moderate' effect (SRM=0.50) must be tagged as 'small' if the correlation between repeated measures is below 0.49 and has to be classified as 'large' (ES≥0.80) in case of ***r***=0.81. The class midpoint 0.65 (not depicted) of the 'moderate effect range of effect must be valued as 'small' with a ***r***=0.14 (0.65/√2/√1–0.14=0.49).

The following section should be inserted instead:

*"However, when **r** deviates from (exactly) 0.50, as will usually be the case, interpretation of the SRM, according to Cohen's thresholds is not straightforward. In general, a correlation >0.50 leads to an ESp that is lower than the corresponding SRM, and thus implying a risk of overestimating the effect. A correlation <0.50 leads to an ESp that is higher than the corresponding SRM, thus implying a risk of underestimating the effect when judging the SRM.*

*Thus, for an SRM of 0.20 one can draw the right conclusion of detecting a small effect when **r** is not higher than 0.50. For any **r** above 0.50 the effect should be considered trivial (e.g. (SRM=0.20*√2*√1–60)=0.18)*

*or when **r**=0.70 ((SRM=0.20*√2*√1–0.70)=0.15). For an SRM of 0.50 one can draw the right conclusion of detecting a moderate effect when **r** is not higher than 0.50. For an **r** above 0.50 the effect should be considered small (e.g. (SRM=0.50*√2*√1–60)=0.44) or when **r**=0.70: SRM=0.50*√2*√1–0.70)=0.39, and for an **r** above 0.92 the effect should be considered even trivial. For an SRM of 0.80 one can draw the right conclusion of detecting a large effect when **r** is not higher than 0.50. For an **r** above 0.50 the effect should be considered moderate (e.g. 0.80*√2*√1–0.70=0.62), for an **r** above 0.80 the effect should be considered small and for an **r** above 0.96 the effect should be considered even trivial.*

*For other SRMs, e.g. 0.65, a low correlation can even lead to an underestimation of the effect size. Instead of considering an SRM of 0.65 a moderate effect, when the correlation is not exceeding 0.25 the effect should be considered large (when **r**=0.20: SRM=0.65*√2*√1–0.20=0.82).*

The following text is correct and needs no change:

In contrast with the fixed threshold values 0.20, 0.50 and 0.80 in Figure 1, in the analysis of 148 effect size estimates from which the correlation of a person's health status measurements over time was calculated, we found SRM values ranging from 0.04 to 2.42.

Correlation coefficients ranged from 0.08 to 0.89 and 70% of the 148 coefficients were larger than 0.50. Overestimates of effect size are easily estimated.

In the last sentence of this section, "a correlation of 0.12" has to be changed into "a correlation of 0.82" and we made some additional minor changes:

For example: an SRM of 0.85 interpreted by the researcher as large effect, changes into a moderate effect according to Cohen's thresholds, due to a correlation of 0.82 between repeated measurements (0.85√2*√1–0.82=0.51)*