# Correction to: Selecting the best product alternative in a sea of uncertainty 

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Published online: 14 April 2021
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## Correction to: The International Journal of Life Cycle Assessment (2021) 26: 616-632 http://doi.org/10.1007/s11367-020-01851-4

The original version of this article unfortunately contained mistakes in the captions of Tables 12, 13, 14, 15. Here are the correct tables given:

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Table 12 Proposed format for communicating comparative results in case of more than two products. A cell like " $\mathrm{X} \leftrightarrow \mathrm{Y}$ " contains information about the difference or preference of X with respect to Y

|  | product A | product B | product C | product D |
| :--- | :--- | :--- | :--- | :--- |
| product A | - | $\mathrm{A} \leftrightarrow \mathrm{B}$ | $\mathrm{A} \leftrightarrow \mathrm{C}$ | $\mathrm{A} \leftrightarrow \mathrm{D}$ |
| product B | $\mathrm{B} \leftrightarrow \mathrm{A}$ | - | $\mathrm{B} \leftrightarrow \mathrm{C}$ | $\mathrm{B} \leftrightarrow \mathrm{D}$ |
| product C | $\mathrm{C} \leftrightarrow \mathrm{A}$ | $\mathrm{C} \leftrightarrow \mathrm{B}$ | - | $\mathrm{C} \leftrightarrow \mathrm{D}$ |
| product D | $\mathrm{D} \leftrightarrow \mathrm{A}$ | $\mathrm{D} \leftrightarrow \mathrm{B}$ | $\mathrm{D} \leftrightarrow \mathrm{C}$ | - |

Table 13 Framework for deciding between two products A and B

|  |  | What is the probability that a randomly selected specimen of product A performs better than a randomly selected specimen of product B ? |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | low | $\approx 50 \%$ | high |
| How much will a randomly selected specimen of product A perform better than a randomly selected specimen of product B? | a bit <br> a lot | questionable choose B | never mind questionable | questionable choose A |

product B ?

The original article can be found online at https://doi.org/10.1007/ s11367-020-01851-4.

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Table 14 Suitability of the various comparison statistics for answering the two relevant questions

| Statistic | Answers the question |  |
| :--- | :--- | :--- |
|  | What is the probability that a randomly <br> selected specimen of product A performs <br> better than a randomly selected specimen of <br> product B? | How much will a randomly selected specimen <br> of product A perform better than a randomly <br> selected specimen of product B? |
| difference in mean or median | no | yes |
| NHST with $t$-test or Wilcoxon-Mann-Whitney <br> test | no | no |
| modified NHST | no | no |
| Cohen's $d$, Pearson's $r$ | no | no |
| nonoverlap statistics $\left(U_{1}, U_{2}, U_{3}, C L E S\right)$ | yes | no |
| Bhattacharyya coefficient and overlapping | yes | no |
| coefficient | yes | no |
| comparison index and discernibility | yes | yes |
| superiority $\left(K_{2}, K_{3}\right)$ | yes |  |

Table 15 Result of the proposed superiority statistics $K_{4}$ for the example system, using $\gamma_{0}=1.2$

|  | independent comparison | dependent <br> compari- <br> son |
| :--- | :---: | :---: |
| Probability of threshold <br> superiority of $\mathrm{A}\left(K_{4, \mathrm{~A}}\right)$ | 0.51 | 0.49 |
| Probability of threshold <br> superiority of $\mathrm{B}\left(K_{4, \mathrm{~B}}\right)$ | 0.10 | 0.00 |

The original article has been corrected.

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