

ALL-IN meta-analysis

Schure, J.A. ter

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Propositions Ph.D. defense

Judith ter Schure – ALL-IN meta-analysis

- 1. Instead of progressing one publication at a time, with everyone focusing on their own paper, clinical science should be more of a continuous collaborative effort. (This dissertation)
- 2. ALL-IN meta-analysis can be especially efficient for time-to-event data at interim stages of studies when individual clinical trials are slow in themselves to provide the necessary number of events for completion. (Chapter 1 of this dissertation)
- 3. *Alpha spending* forces the researcher into an all-or-nothing decision at the end of a clinical trial, while *alpha saving* and safe tests prepare the researcher for future trials and focus on contributing to the existing line of research. (Chapter 2 of this dissertation)
- 4. The decision to replicate only some studies (instead of all of them) biases the sampling distribution of study series but can be a very efficient approach to set priorities in research and reduce research waste. (Chapter 3, 4, and 5 of this dissertation)
- 5. We need statistical methodology that gives yes/no-answers since without a finish line we cannot know how to complete a line of research and allocate resources in any optimal way. (Field of this dissertation)
- 6. Collaboration and data sharing in meta-analyses decrease the risk of mistakes due to honest errors and questionable research practices, and prevent that we must otherwise assume the worst (i.e. according to Richard Smith, in his BMJ blog of July 5th, 2021 "that health research is fraudulent until proven otherwise"). (Field of this dissertation)
- The Covid-19 pandemic has shown that it is not always better to resort to big data and complicated analysis, but that we should more often return to the principles of the 1980s (e.g. those of Richard Peto) and rely on randomized controlled trials that are simple and large. (Field of this dissertation)
- 8. "Why Most Clinical Research Is Not Useful" was a much better paper title than "Why Most Published Research Findings Are False". (Field of this dissertation)
- 9. If we do not have enough time as researchers to read papers, review papers and help each other write good papers, then we need to write fewer papers, ask for fewer papers per Ph.D. dissertation and create fewer Ph.D. positions. (Personal)
- 10. The martingale the mathematical process that drives ALL-IN meta-analysis has a strange name that might not have arisen among the villagers that behave *martigale*, i.e. in the way of Martigues, since "Martingales have nothing to see with Martigues, have nothing to see with Martigues" gentleman from the Martigues historical museum (Musée d'histoire de Martigues) on November 13th, 2021. (Personal)