

# Effect and shrinkage estimation in meta-analyses of two studies

Christian Röver\*

In modern evidence based medicine, meta analysis is an important tool to rigorously combine separate sources of information. In practice, a substantial fraction of analyses is based on as few as 3 or less studies. This poses a practical problem especially for frequentist methods, while for the simple Bayesian random-effects meta-analysis it only means that little information is to be gained on the heterogeneity parameter, and hence its prior is very relevant and needs to be specified carefully [1].

We use the `bayesmeta` R package [2] to investigate the long-run performance of Bayesian methods and compare it to classical frequentist approaches [3]. The random effects meta-analysis model also constitutes a transparent framework to provide supporting information for a single, individual study outcome via shrinkage estimation [4, 5]. We explore the potential of a simple random-effects meta-analysis for effect and shrinkage estimation in the extreme case of only two studies.

## References

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\*Department of Medical Statistics, University Medical Center Göttingen, Göttingen, Germany. [christian.roever@med.uni-goettingen.de](mailto:christian.roever@med.uni-goettingen.de)