

Meta-analysis using R (Hands-on)

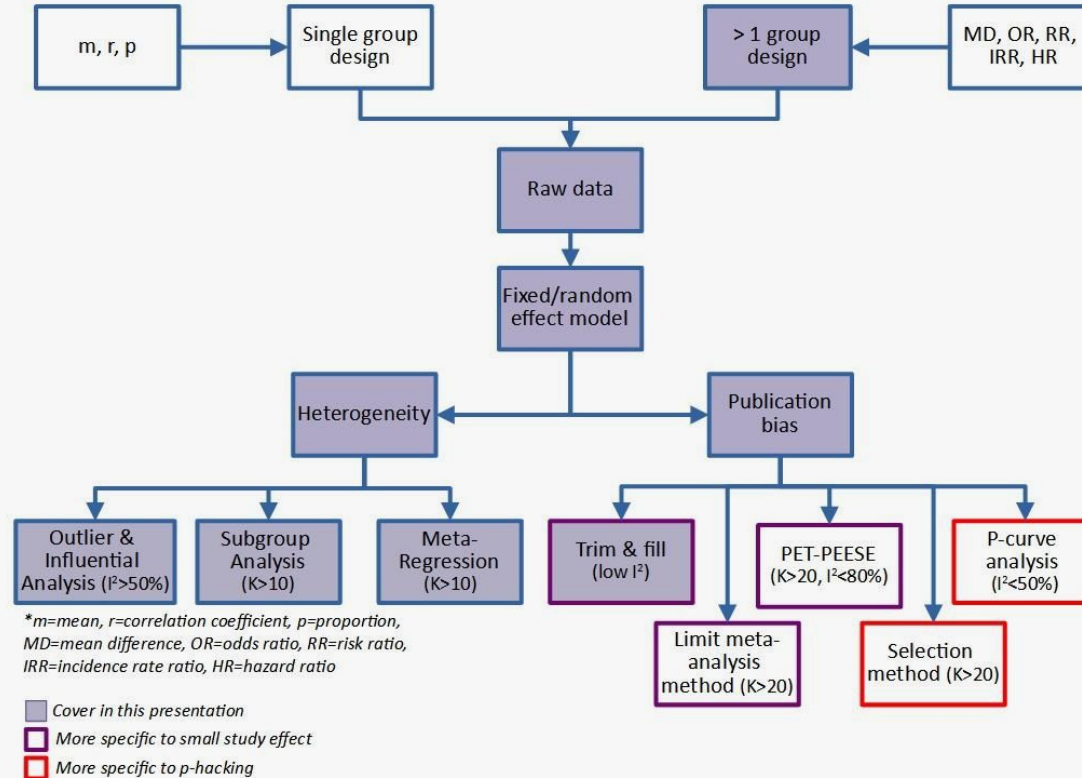


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To do:

1. Open RStudio cloud:
 - Open new project in your working space
2. Copy and paste R code from github to RStudio cloud
 - <https://github.com/tengku-hanis/MA-PPSP-USM>
 - Make sure the R code is pasted in a R script in a new project
3. Install required packages

Flow of analysis



R packages for meta-analysis

- Main packages:
 - meta
 - metafor
- Other packages on CRAN (a lot !)

meta package

- Precalculated effect size (binary should be log-transformed):
 - Generic inverse variance meta-analysis (metagen)
- Uncalculated effect size (raw):
 - Meta-analysis of continuous outcome data (metacont)
 - ***Meta-analysis of binary outcome data (metabin)***
 - Meta-analysis of incidence rates (metainc)
 - Meta-analysis of single correlations (metacor)
 - Meta-analysis of single means (metamean)
 - Meta-analysis of single proportions (metaprop)
 - Meta-analysis of single incidence rates (metarate)

About the data

- Our aim - evaluate the benefit of ivermectin in reducing mortality rate among COVID-19 patients
- Data:
 - Ivermectin group (279/3240)
 - Control group (1347/9407)
- Preprint paper -
<https://www.medrxiv.org/content/10.1101/2021.04.30.21256415v2.full-text>

Questions?



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