

An Overview of Functions in the *metafor* Package

last updated: Nov 22 2014

(not all functions documented)

given the required data (e.g., means, SDs, and group sizes; counts for 2x2 tables; correlations and sample sizes), calculate the desired effect size or outcome measure for the meta-analysis (e.g., raw or standardized mean differences, log odds ratios, log risk ratios, risk differences, r-to-z transformed correlations, ...)

read.table()
read.csv()
read.delim()

- read in data from ASCII file
- see also 'foreign' package for reading in other data formats

escalc()

- yi = observed outcomes or effect size estimates
- vi = corresponding sampling variances

rma.uni()
rma.mh()
rma.peto()
rma.glmm()
rma.mv()

- rma.uni() = fixed- and random/mixed-effects models ("inverse-variance" method; normal-normal models)
- rma.mh() = Mantel-Haenszel method (fixed-effects model)
- rma.peto() = Peto's method (fixed-effects model)
- rma.glmm() = fixed- and random/mixed-effects models (binomial-normal and Poisson-normal models)
- rma.mv() = fixed- and random/mixed-effects multivariate/multilevel models (normal-normal models)

print()
summary()

note: rma.uni() takes either 'yi' and 'vi' as input or one can supply the required data to calculate the desired effect size or outcome measure for the meta-analysis directly; rma.mh(), rma.peto(), and rma.glmm() require that the raw counts are supplied; rma.mv() takes 'yi' and 'V' as input (V is the variance-covariance matrix of the sampling errors / residuals)

print()
summary()

fitted()
predict()
blup()

residuals()
rstandard()
rstudent()
hatvalues()
weights()
influence()
leave1out()

ranktest()
regtest()
trimfill()
hc()

confint()
anova()
permutest()

forest()
funnel()
labbe()
radial()
qqnorm()
baujat()
plot()

logLik()
deviance()
fitstats()
AIC(), BIC()
coef()
vcov()

note: class of fitted model object is the same as the function name; so print() for an object of class 'rma.uni' actually calls print.rma.uni() and so on

note: blup() only for 'rma.uni' objects

note: all functions implemented for 'rma.uni' objects; coverage of functions for other objects is more limited (see docs)

note: regtest() not for 'rma.glmm' or 'rma.mv' objects; trimfill() and hc() only for 'rma.uni' objects

note: confint() not for 'rma.glmm' or 'rma.mv' objects; anova() only for 'rma.uni' and 'rma.mv' objects; permutest() only for 'rma.uni' objects;

note: forest() can also take 'yi' and 'vi' directly as input; qqnorm(), baujat(), and plot() not for 'rma.glmm' or 'rma.mv' objects

note: coef() also for 'permutest.rma.uni' and 'summary.rma' objects

note: restrictions may change with future updates