Package ‘metacor’

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Title Meta-analysis of correlation coefficients
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Author Etienne Laliberté
Maintainer Etienne Laliberté <etiennelaliberte@gmail.com>
Description Implement the DerSimonian-Laird (DSL) and Olkin-Pratt (OP) meta-analytical approaches with correlation coefficients as effect sizes.
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Meta-analysis of correlation coefficients

Description

Implement the DerSimonian-Laird (DSL) and Olkin-Pratt (OP) meta-analytical approaches with correlation coefficients as effect sizes.

Details

Package: metacor
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Version: 1.0-2
Date: 2011-03-21
License: GLP-2
LazyLoad: yes

Author(s)

Etienne Laliberté
Maintainer: Etienne Laliberté <etiennelaliberte@gmail.com> http://www.elaliberte.info/

References


lui  

Response diversity and functional redundancy of plant communities under land use intensification across 18 land use intensity gradients

Description

This dataset contains the correlation coefficients between land use intensity and response diversity (r.FDis) or functional redundancy (r.nb) across 18 land use intensity gradients from nine countries and five biomes.

Usage

data(lui)
**Format**

A data frame with 18 observations on the following 4 variables.

- **label**: the labels for each study
- **r.FDis**: a numeric vector containing the correlation coefficients between land use intensity and response diversity for each land use intensity gradient
- **r.nbsp**: a numeric vector containing the correlation coefficients between land use intensity and functional redundancy for each land use intensity gradient
- **n**: a numeric vector containing the sample sizes used for each study

**Source**


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**Description**

Implements the DerSimonian-Laird (DSL) random-effect meta-analytical approach with correlation coefficients as effect sizes, as described by Schulze (2004).

**Usage**

```r
metacor.DSL(r, n, labels, alpha = 0.05, plot = TRUE, xlim = c(-1, 1), transform = TRUE)
```

**Arguments**

- **r**: vector of correlations
- **n**: vector of sample sizes
- **labels**: vector of the study names
- **alpha**: alpha-level for the main test and for the confidence intervals
- **plot**: logical; should a forest plot be returned?
- **xlim**: range of the x-axis of the forest plot
- **transform**: logical; should the z-values be back-transformed to r-space?
Value

- **z**: vector of the z-values
- **z.var**: vector of the variances of each z
- **z.lower**: the lower limits of the confidence intervals for each z
- **z.upper**: the upper limits of the confidence intervals for each z
- **z.mean**: the mean effect size z
- **r.mean**: the mean effect size r, back-transformed from z-space
- **z.se**: the standard error of z.mean
- **z.mean.lower**: the lower limit of the confidence interval for z.mean
- **r.mean.lower**: the lower limit of the confidence interval for r.mean, back-transformed from z-space
- **z.mean.upper**: the upper limit of the confidence interval for z.mean
- **r.mean.upper**: the upper limit of the confidence interval for r.mean, back-transformed from z-space
- **p**: the p-value for the null hypothesis H0 -> z.mean = 0

Author(s)

Etienne Laliberté <etiennelaliberte@gmail.com> [http://www.elaliberte.info/](http://www.elaliberte.info/)

References


See Also

- metacor.OP

Examples

```r
data(lui)
lui <- lui[order(lui$r.FDis),]
test <- metacor.DSL(lui$r.FDis, lui$n, lui$label)
test
```
Description

Implements the Olkin-Pratt (DSL) fixed-effect meta-analytical approach with correlation coefficients as effect sizes, as described by Schulze (2004).

Usage

```r
metacor.OP(r, n, labels, alpha = 0.05, plot = TRUE, xlim = c(-1, 1))
```

Arguments

- `r`: vector of correlations
- `n`: vector of sample sizes
- `labels`: vector of the study names
- `alpha`: alpha-level for the main test and for the confidence intervals
- `plot`: logical; should a forest plot be returned?
- `xlim`: range of the x-axis of the forest plot

Value

- `G`: vector of the G-values
- `G.var`: vector of the variances of each G
- `G.lower`: the lower limits of the confidence intervals for G
- `G.upper`: the upper limits of the confidence intervals for G
- `G.mean`: the mean effect size G
- `G.se`: the standard error of G.mean
- `G.mean.lower`: the lower limit of the confidence interval for G.mean
- `G.mean.upper`: the upper limit of the confidence interval for G.mean
- `p`: the p-value for the null hypothesis H0 -> G.mean = 0

Author(s)

Etienne Laliberté <etiennelaliberte@gmail.com> [http://www.elaliberte.info/]

References

See Also

metacor.DSL

Examples

data(lui)
lui <- lui[order(lui$r.FDis),]
test <- metacor.OP(lui$r.FDis, lui$n, lui$label)
test
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