Package 'estimraw'

October 13, 2022

Title Estimation of Four-Fold Table Cell Frequencies (Raw Data) from Effect Size Measures

Version 1.0.0

Author Bernardo Sousa-Pinto [aut, cre]
(<https://orcid.org/0000-0002-1277-3401>),
Carlo Di Pietrantonj [aut] (<https://orcid.org/0000-0002-7302-5714>)

Maintainer Bernardo Sousa-Pinto <bernardo@med.up.pt>

Depends R (>= 3.0.0), dplyr

Description Estimation of four-fold table cell frequencies (raw data) from risk ratios (relative risks), risk differences and odds ratios. While raw data can be useful for doing meta-analysis, such data is often not provided by primary studies (with summary statistics being solely presented). Therefore, based on summary statistics (namely, risk ratios, risk differences and odds ratios), this package estimates the value of each cell in a 2x2 table according to the equations described in Di Pietrantonj C (2006) <doi:10.1002/sim.2287>.

License GPL-2

Encoding UTF-8

LazyData true

RoxygenNote 7.1.0

NeedsCompilation no

Repository CRAN

Date/Publication 2020-07-16 09:10:02 UTC

R topics documented:

---

estim_raw   *Estimation of Four-Fold (2x2) Table Cell Frequencies (Raw Data) from Effect Size Measures*

Description

Estimation of four-fold (2x2) table cell frequencies (raw data) from risk ratios (relative risks), risk differences and odds ratios.

Usage

```
estim_raw(es, lb, ub, m1, m2, e1, dec = 1, measure = c("or", "rd", "rr"))
```

Arguments

es	Value of the effect size (summary statistic).
lb	Lower bound of the 95% confidence interval of the effect size.
ub	Upper bound of the 95% confidence interval of the effect size.
m1	Total number of participants in the exposed/treated group.
m2	Total number of participants in the unexposed/control group.
e1	Total number of participants developing the outcome event (optional).
dec	Number of decimal places with which effect sizes are being presented.
measure	Character string indicating the type of effect size measure. Possible options are the risk ratio/relative risk ("rr"), the risk difference ("rd"), and the odds ratio ("or").

Value

1. Estimates from risk ratios: A dataframe. If there is information on the number of participants developing the outcome event (e1), this dataframe will list all sets of results in which a+c=e1. If no such information is provided, this dataframe will list a point estimate for each cell (calculated based on the exact input values), as well as minimum and a maximum estimate.

2. Estimates from risk differences: A list consisting of two dataframes - solution1 (presenting the results of the first solution of the quadratic formula) and solution2 (presenting the results of the second solution of the quadratic formula). If there is information on the number of participants developing the outcome event (e1), each of these dataframes will list all sets of results in which a+c=e1. If no such information is provided, each of these dataframes will list a point estimate for each cell (calculated based on the exact input values), as well as minimum and a maximum estimate.

Examples

```
estim_rr <- estim_raw(es=0.6,lb=0.4,ub=0.9,m1=352,m2=376,dec=1,measure="rr")
estim_rr

estim_or1 <- estim_raw(es=0.6207,lb=0.3382,ub=1.1391,m1=355,m2=366,dec=4,measure="or")
estim_or1

estim_or2 <- estim_raw(es=0.6,lb=0.3,ub=1.1,m1=355,m2=366,e1=47,dec=1,measure="or")
estim_or2

estim_rd <- estim_raw(es=-0.0783,lb=-0.1387,ub=-0.018,m1=373,m2=357,e1=163,dec=4,measure="rd")
estim_rd
```

Index