Package: nose (via r-universe)

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Type Package

Title Classification of Sparseness in 2-by-2 Categorical Data

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Description Provides functions for classifying sparseness in 2 x 2 categorical data where one or more cells have zero counts. The classification uses three widely applied summary measures: Risk Difference (RD), Relative Risk (RR), and Odds Ratio (OR). Helps in selecting suitable continuity corrections for zero cells in multi-centre or meta-analysis studies. Also supports sensitivity analysis and can detect phenomena such as Simpson's paradox. The methodology is based on Subbiah and Srinivasan (2008) <doi:10.1016/j.spl.2008.06.023>.

License GPL-2

Encoding UTF-8

RoxygenNote 7.3.1

NeedsCompilation no

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nose.or *Classify Sparseness in 2x2 Tables using Odds Ratio*

Description

Classifies sparseness in 2x2 categorical tables where one or more cells are zero. The classification uses widely applied summary measures and a continuity correction to determine whether a table exhibits mild, moderate, or severe sparseness.

Usage

```
nose.or(nos, cc)
```

Arguments

nos	A numeric matrix or data.frame with 4 columns representing counts in a 2x2 table: a (top-left), b (top-right), c (bottom-left), d (bottom-right). Each row corresponds to a separate 2x2 table.
cc	Continuity correction factor (numeric, e.g., 0.3)

Value

A matrix combining the input counts with an extra column indicating the sparseness classification for each table.

Examples

```
# Simple example: one 2x2 table with a zero cell
xx <- matrix(c(0, 3, 2, 5), nrow = 1, byrow = TRUE)
nose.or(xx, cc = 0.3)

# Multiple tables example: each row is a separate 2x2 table
tables <- matrix(c(
  0, 3, 2, 5,
  2, 0, 1, 4,
  0, 0, 2, 3
), nrow = 3, byrow = TRUE)
nose.or(tables, cc = 0.3)
```

nose.rd *Classify Sparseness in 2x2 Tables using Risk Difference*

Description

Classifies sparseness in 2x2 categorical tables where one or more cells are zero. The classification uses widely applied summary measures and a continuity correction to determine whether a table exhibits mild, moderate, or severe sparseness.

Usage

```
nose.rd(nos, cc)
```

Arguments

nos	A numeric matrix or data.frame with 4 columns representing counts in a 2x2 table: a (top-left), b (top-right), c (bottom-left), d (bottom-right). Each row corresponds to a separate 2x2 table.
cc	Continuity correction factor (numeric, e.g., 0.3)

Value

A matrix combining the input counts with an extra column indicating the sparseness classification for each table.

Examples

```
# Simple example: one 2x2 table with a zero cell
xx <- matrix(c(0, 3, 2, 5), nrow = 1, byrow = TRUE)
nose.rd(xx, cc = 0.3)

# Multiple tables example: each row is a separate 2x2 table
tables <- matrix(c(
  0, 3, 2, 5,
  2, 0, 1, 4,
  0, 0, 2, 3
), nrow = 3, byrow = TRUE)
nose.rd(tables, cc = 0.3)
```

nose.rr *Classify Sparseness in 2x2 Tables using Risk Ratio*

Description

Classifies sparseness in 2x2 categorical tables where one or more cells are zero. The classification uses widely applied summary measures and a continuity correction to determine whether a table exhibits mild, moderate, or severe sparseness.

Usage

```
nose.rr(nos, cc)
```

Arguments

nos	A numeric matrix or data.frame with 4 columns representing counts in a 2x2 table: a (top-left), b (top-right), c (bottom-left), d (bottom-right). Each row corresponds to a separate 2x2 table.
cc	Continuity correction factor (numeric, e.g., 0.3)

Value

A matrix combining the input counts with an extra column indicating the sparseness classification for each table.

Examples

```
# Simple example: one 2x2 table with a zero cell
xx <- matrix(c(0, 3, 2, 5), nrow = 1, byrow = TRUE)
nose.rr(xx, cc = 0.3)

# Multiple tables example: each row is a separate 2x2 table
tables <- matrix(c(
  0, 3, 2, 5,
  2, 0, 1, 4,
  0, 0, 2, 3
), nrow = 3, byrow = TRUE)
nose.rr(tables, cc = 0.3)
```

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