Package 'kaphom'

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Type Package

Title Test the Homogeneity of Kappa Statistics

Version 0.3

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Description Tests the homogeneity of intraclass kappa statistics obtained from independent studies or a stratified study with binary results. It is desired to compare the kappa statistics obtained in multi-center studies or in a single stratified study to give a common or summary kappa using all available information. If the homogeneity test of these kappa statistics is not rejected, then it is possible to make inferences over a single kappa statistic that summarizes all the studies. Muammer Albayrak, Kemal Turhan, Yasemin Yavuz, Zeliha Aydin Kasap (2019) <doi:10.1080/03610918.2018.1538457> Junmo Nam (2003) <doi:10.1111/j.0006-341X.2003.00118.x> Junmo Nam (2005) <doi:10.1002/sim.2321>Mousumi Banerjee, Michelle Capozzoli, Laura McSweeney,Debajyoti Sinha (1999) <doi:10.2307/3315487> Allan Donner, Michael Eliasziw, Neil Klar (1996) <doi:10.2307/2533154>.

Imports stats

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

NeedsCompilation no

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R topics documented:

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donnerhom *Donner GOF test for homogeneity of kappa statistics*

Description

Donner GOF test for homogeneity of kappa statistics

Usage

```
donnerhom(pp, pm, mm)
```

Arguments

pp	a number vector carrying the number of positive maching rates for each study
pm	a number vector carrying the number of non-maching rates for each study
mm	a number vector carrying the number of negative maching rates for each study

Details

This function can be used only for studies with binary output

Value

This function prints the Donner GOF test statistic, P-value for hypothesis test of the statistic and whether the difference is statistically significant or not.

Author(s)

Muammer ALBAYRAK

Examples

```
library(kaphom)

pp <- c(11,26,22)
pm <- c(6,5,14)
mm <- c(22,10,39)

donnerhom(pp,pm,mm)
```

`fleisshom` *Fleiss test for homogeneity of kappa statistics*

Description

Fleiss test for homogeneity of kappa statistics

Usage

```
fleisshom(pp, pm, mm)
```

Arguments

pp	a number vector carrying the number of positive maching rates for each study
pm	a number vector carrying the number of non-maching rates for each study
mm	a number vector carrying the number of negative maching rates for each study

Details

This function can be used only for studies with binary output

Value

This function prints the Fleiss test statistic, P-value for hypothesis test of the statistic and whether the difference is statistically significant or not.

Author(s)

Muammer ALBAYRAK

Examples

```
library(kaphom)

pp <- c(11,26,22)
pm <- c(6,5,14)
mm <- c(22,10,39)

fleisshom(pp,pm,mm)
```

`lscorehom` *Likelihood Score test for homogeneity of kappa statistics*

Description

Likelihood Score test for homogeneity of kappa statistics

Usage

```
lscorehom(pp, pm, mm)
```

Arguments

pp	a number vector carrying the number of positive maching rates for each study
pm	a number vector carrying the number of non-maching rates for each study
mm	a number vector carrying the number of negative maching for each study

Details

This function can be used only for studies with binary output

Value

This function prints the Likelihood Score test statistic, P-value for hypothesis test of the statistic and whether the difference is statistically significant or not.

Author(s)

Muammer ALBAYRAK

Examples

```
library(kaphom)

pp <- c(11,26,22)
pm <- c(6,5,14)
mm <- c(22,10,39)

lscorehom(pp,pm,mm)
```

`mlscorehom` *Modified Likelihood Score test for homogeneity of kappa statistics*

Description

Modified Likelihood Score test for homogeneity of kappa statistics

Usage

```
mlscorehom(pp, pm, mm)
```

Arguments

pp	a number vector carrying the number of positive maching rates for each study
pm	a number vector carrying the number of non-maching rates for each study
mm	a number vector carrying the number of negative maching rates for each study

Details

This function can be used only for studies with binary output

Value

This function prints the Modified Likelihood Score test statistic, P-value for hypothesis test of the statistic and whether the difference is statistically significant or not.

Author(s)

Muammer ALBAYRAK

Examples

```
library(kaphom)

pp <- c(11,26,22)
pm <- c(6,5,14)
mm <- c(22,10,39)

mlscorehom(pp,pm,mm)
```

pearsonhom *Pearson GOF test for homogeneity of kappa statistics*

Description

Pearson GOF test for homogeneity of kappa statistics

Usage

```
pearsonhom(pp, pm, mm)
```

Arguments

pp	a number vector carrying the number of positive maching rates for each study
pm	a number vector carrying the number of non-maching rates for each study
mm	a number vector carrying the number of negative maching rates for each study

Details

This function can be used only for studies with binary output

Value

This function prints the Pearson GOF test statistic, P-value for hypothesis test of the statistic and whether the difference is statistically significant or not.

Author(s)

Muammer ALBAYRAK

Examples

```
library(kaphom)

pp <- c(11,26,22)
pm <- c(6,5,14)
mm <- c(22,10,39)

pearsonhom(pp,pm,mm)
```

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