

Package ‘SEofM’

January 20, 2025

Type Package

Title Standard Error of Measurement

Version 0.1.0

Description

To calculate the standard error of measurement (SEM) to assess the observer variability (inter- and intra-observer variation).

The methods used in this package are referenced from Zoran B. Popović (2017) <[doi:10.21037/cdt.2017.03.12](https://doi.org/10.21037/cdt.2017.03.12)>.

License GPL-3

Encoding UTF-8

NeedsCompilation no

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Repository CRAN

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SEM

*Standard Error of Measurement***Description**

To calculate the standard error of measurement (SEM) to assess the observer variability.

Usage

```
SEM(subject, measurement, observer, value)
```

Arguments

| | |
|-------------|---|
| subject | the index of the subjects, e.g., 1,2,3...;1,2,3... |
| measurement | the index of the measurements, e.g., 1,1,1...;2,2,2... |
| observer | the index of the observers, e.g., 1,1,1...;2,2,2... |
| value | the value of the subjects estimated by the observers using the measurements |

Value

| | |
|-----------------------------|---|
| SEM _{intra} | SEM for intra-observer variation |
| SEM _{inter.fixed} | SEM for inter-observer variation |
| SEM _{inter.random} | SEM for inter-observer variation, which is almost always used than SEM _{inter.fixed} |

Note

Please feel free to contact us, if you have any advice and find any bug!

Reference:

1. Zoran B. Popović, James D. Thomas (2017) Assessing observer variability: a user's guide, *Cardiovascular Diagnosis and Therapy*, 7(3): 317-324, DOI: 10.21037/cdt.2017.03.12

Update:

Version 0.1.0: The first version.

Examples

```
data(SEMSample)
value=SEMSample$value
observer=SEMSample$observer
subject=SEMSample$patient
measurement=SEMSample$measurement
SEM(subject, measurement, observer, value)
```

`SEMSample`*Sample Data for SEM*

Description

Sample data set of repeated measurements by three observers in 20 patients.

Usage

```
data(SEMSample)
```

Format

A data.frame containing 120 observations of 4 variables.

Source

Zoran B. Popović, James D. Thomas (2017) Assessing observer variability: a user's guide, Cardiovascular Diagnosis and Therapy, 7(3): 317-324, DOI: 10.21037/cdt.2017.03.12

Examples

```
# load the dataset  
data(aSAH)
```

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* **datasets**

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