

Package ‘glvmfit’

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Title Methods to Assess Generalized Latent Variable Model Fit

Version 0.0.0

Description

Provides standardized root mean residual global fit index for generalized latent variable models.

Encoding UTF-8

LazyData true

License GPL-3

RoxygenNote 7.1.1

Depends R (>= 2.10)

NeedsCompilation no

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R topics documented:

nlsy	1
smmr	2

Index	4
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nlsy	<i>Subset of 221 children from the 1979 National Longitudinal Survey of Youth</i>
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Description

These data are wave-based such that each child’s Peabody Individual Assessment Test (PIAT) reading and antisocial behavior scores were measured at four waves in two-year intervals.

Usage

```
nlsy
```

Format

A data frame with 221 rows and 14 variables:

id Unique identifier

mom_age Mother's age when the child was born

home_cog Measure of cognitive stimulation provided at home

home_emo Measure of emotional support provided at home

read0 PIAT reading score at wave 1

read1 PIAT reading score at wave 2

read2 PIAT reading score at wave 3

read3 PIAT reading score at wave 4

anti0 Antisocial behavior score at wave 1

anti1 Antisocial behavior score at wave 2

anti2 Antisocial behavior score at wave 3

anti3 Antisocial behavior score at wave 4

Source

<https://github.com/MultiLevelAnalysis/Datasets-third-edition-Multilevel-book/tree/master/chapter%205/Curran>

srmr

Standardized Root Mean Residual

Description

Computes the square root of the discrepancy between the sample covariance and mean and the model-implied covariance and mean.

Usage

```
srmr(
  S = NULL,
  Sigma = NULL,
  ybar = NULL,
  mu = NULL,
  lavaan_object = NULL,
  exo = TRUE
)
```

Arguments

S	sample covariance matrix
Sigma	model-implied covariance matrix
ybar	sample mean vector
mu	model-implied mean vector
lavaan_object	is a fitted model of class lavaan
exo	boolean argument indicating if model has exogenous covariates

Value

A list including the SRMR component names, sum of squared residuals for each component, and the SRMR for each component.

Details

S, Sigma, ybar, and mu must be of the same dimensions.

If the sum of the diagonal elements of S equal 1 such that S is a correlation matrix, the variance component of SRMR is not included

Examples

```
Sigma <- matrix(c(1.022, .550, .622, .550, .928, .783, .622, .783, 1.150),
               nrow = 3)
S <- matrix(c(.770, .545, .515, .545, 1.003, .890, .515, .890, 1.211),
            nrow = 3)
ybar <- c(2.516, 4.041, 5.021)
mu <- c(2.825, 3.877, 4.929)

srmr(S = S, Sigma = Sigma, ybar = ybar, mu = mu)
```

Index

* **datasets**
 nlsy, [1](#)

nlsy, [1](#)

srmr, [2](#)