Package ‘mxmmod’

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### mxMmodModel

**Create an MMOD**

**Description**

This function builds a Measurement Model of Derivatives (MMOD; Estabrook 2015) with a given factor structure.

**Usage**

```r
mxMmodModel(data, modelName, idvar, timevar, structure, fiml = FALSE)
```

**Arguments**

- `data`: a data frame with measurements in long format
- `modelName`: name for the resulting model
- `idvar`: name of column for subject IDs
- `timevar`: name of column for measurement occasion
- `structure`: factor structure, see 'Details'
- `fiml`: if true, use raw data to fit model with FIML. Otherwise, fit using cov matrix (dropping missing values if necessary).

**Details**

The `structure` argument is a list of latent factors and their mappings to manifest variables. For example, a one factor structure would be:

```r
list(F1 = c('m1', 'm2', 'm3', 'm4', 'm5', 'm6'))
```

And a two factor structure would be:

```r
list(F1 = c('m1', 'm2', 'm3'), F2 = c('m4', 'm5', 'm6'))
```

**Value**

an MMOD as an mxModel object

**Examples**

```r
data(nlsy97depression)
# Fit one factor MMOD
structure <- list(
  F1 = c('nervous', 'down', 'depressed', 'calm', 'happy')
)
mmod_model <- mxMmodModel(data=nlsy97depression, modelName='1 Factor MMOD', idvar='pid', timevar='occasion', structure=structure)
mmod_fit <- OpenMx::mxRun(mmod_model)
summary(mmod_fit)
```
Description

A 5-item depression scale used on the National Longitudinal Survey of Youth, 1997 sample (NLSY97). Individuals were assessed in 2000, 2002, and 2004. All items are assessed on a 4-point likert scale.

Usage

nlsy97depression

Format

A data frame with 26952 rows and 7 variables:

pid Unique ID of participant
sex Sex of participant
birth_m Birth Month
birth_y Birth Year
occasion Measurement occasion
nervous How often participant felt 'like a nervous person'
calm How often participant felt 'calm and peaceful'
down How often participant felt 'down or blue'
happy How often participant felt 'like a happy person'
depressed How often participant felt 'depressed'

Source

https://www.bls.gov/nls/nlsy97.htm
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