

# Package ‘SMEP24’

September 3, 2024

**Type** Package  
**Title** SMEP 2024 Project  
**Version** 0.1.0  
**Author** Nathan DePuy and Jonathan Templin  
**Maintainer** Nathan DePuy <depy@uiowa.edu>  
**Description** Contains files for the 2024 SMEP project  
**License** MIT + file LICENSE  
**Encoding** UTF-8  
**LazyData** true  
**Suggests** testthat (>= 3.0.0)  
**Depends** bayesplot,  
cmdstanr,  
ggplot2  
**Config/testthat/edition** 3  
**RoxygenNote** 7.3.2

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bifactor	<i>Generate a Bifactor Simulation Environment</i>
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## Description

Generate a Bifactor Simulation Environment

**Usage**

```
bifactor(...)
```

**Arguments**

...                      objects inherited from parent

**Value**

an environment stored to a list object of the bifactor simulation environment

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countRhat	<i>Rhat Convergence Indicator Function</i>
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**Description**

Rhat Convergence Indicator Function

**Usage**

```
countRhat(modsum, rHatThreshold = 1.05)
```

**Arguments**

rHatThreshold    maximum tolerance for indicated convergence based on Rhat values  
 modum            'data.frame' object generated from '\$summary()' method on a 'cmdstanr' model environment

**Value**

count of Rhat > threshold

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getDims	<i>Find Dimensions of Filtered .GlobalEnv Object</i>
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**Description**

Find Dimensions of Filtered .GlobalEnv Object

**Usage**

```
getDims(name)
```

**Arguments**

name                      name of target object

**Value**

integer of object's total dimensions

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getStdSumScore	<i>Calculate Standardized Sum Scores</i>
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**Description**

Calculate Standardized Sum Scores

**Usage**

```
getStdSumScore(resps)
```

**Arguments**

resps	matrix of dichotomized (0/1) item response data
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**Value**

a vector of standardized sum scores of the measured latent trait

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makeNeg	<i>Negative Lambda Indicator Function</i>
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**Description**

Negative Lambda Indicator Function

**Usage**

```
makeNeg(lambda, numNeg = 2)
```

**Arguments**

lambda	inputted item discrimination/slope values
numNeg	integer indicating quantity of lambda values to negate

**Value**

a vector of all lambda values (including negated lambdas)

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`twopl`*Generate a 2-Parameter Logistic (2PL) IRT Simulation Environment*

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**Description**

Generate a 2-Parameter Logistic (2PL) IRT Simulation Environment

**Usage**

```
twopl(...)
```

**Arguments**

...                    objects inherited from parent

**Value**

an environment stored to a list object of the 2PL simulation environment

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