

# Package ‘IMPACT’

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**Version** 0.1.1

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**Title** The Impact of Items

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**Depends** R(>= 3.0.0)

**Description** Implement a multivariate analysis of the impact of items to identify a bias in the questionnaire validation of Likert-type scale variables. The items requires considering a null value (category doesn't have tendency). Offering frequency, importance and impact of the items.

**License** GPL (>= 2)

**URL** <http://www.uv.mx/personal/nehuerta/impact>

**Encoding** UTF-8

**NeedsCompilation** no

**RoxygenNote** 6.0.1

**Repository** CRAN

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## Contents

|                  |          |
|------------------|----------|
| IMPACT . . . . . | 1        |
| <b>Index</b>     | <b>4</b> |

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|        |                            |
|--------|----------------------------|
| IMPACT | <i>The Impact of Items</i> |
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## Description

This function returns an estimation based on the patterns of items.  
Introduce a set of categorical data set classified as numerical data.

**Usage**

```
IMPACT(x, y)
```

**Arguments**

|   |                 |
|---|-----------------|
| x | is a data set   |
| y | is a null value |

**Details**

This function returns a multivariate analysis of the impact of items to identify a bias in the questionnaire validation. It estimates the impact of items.

This function takes a set of values produced by the IMPACT. functions returns estimations for each item provided in the input x matrix.

**Value**

Null.value a null value  
 Less.impact values of the item with less impact  
 Greater.impact values of the item with greater impact  
 Summary.table a summary table with the impact of items

**Author(s)**

Nery Sofia Huerta-Pacheco

**References**

Juniper, E. F., Guyatt, G. H., Streiner, D. L., & King, D. R. (1997). Clinical impact versus factor analysis for quality of life questionnaire construction. *Journal of Clinical Epidemiology*, 233-238.

Allen, F., & Locker, D. (2002). A Modified Short Version of the Oral Health Impact Profile for Assessing Health-Related Quality of Life in Edentulous Adults. *The International Journal of Prosthodontics*, 15(5), 446-450.

Lesaffre, E. (2009). Statistical and methodological aspects of oral health research. John Wiley & Sons. DOI: 10.1002/9780470744116

Vicente Galindo, E. D. (2011). Analisis del Impacto frente a Teoría de Respuesta al Ítem (Trabajo Fin de Master). Master Universitario en Analisis Avanzado de Datos Multivariantes, Statistics Department, University of Salamanca, Spain.

**Examples**

```
## Not run:
library(IMPACT)
## Reads a likert-type scale dataset
x<-matrix(c(2, 5, 5, 4, 4, 5, 4, 4, 5, 1, 3, 4, 4, 1, 5, 2, 2, 4, 3, 5,
5, 1, 1, 4, 5, 2, 2, 4, 4, 5, 2, 4, 2, 5, 3, 4, 3, 3, 5, 3,
3, 5, 5, 5, 5, 5, 5, 5, 3, 4, 3, 5, 3, 4, 5, 4, 4, 4, 5,
```

```
4, 1, 2, 2, 3, 1, 1, 3, 2, 5, 3, 2, 1, 5, 2, 2, 4, 1, 5, 1,
2, 4, 4, 4, 3, 5, 5, 4, 2, 2, 4, 3, 5, 2, 4, 5, 4, 4, 1, 5,
4, 1, 2, 3, 3, 1, 2, 5, 4, 5, 4, 3, 1, 4, 1, 3, 4, 2, 4, 2,
4, 1, 2, 3, 4, 1, 1, 4, 4, 5, 3, 3, 1, 1, 1, 4, 4, 2, 4, 1,
5, 1, 3, 3, 4, 5, 3, 5, 4, 5, 4, 4, 2, 5, 2, 4, 4, 4, 4, 4,
4, 4, 2, 3, 1, 3, 2, 3, 3, 1, 1, 2, 4, 1, 5, 2, 2, 3, 3, 4),20,10)
##Put names of variables
colnames(x)<-c(paste("A","-",1:10))
##Declare a null value
y<-3
IMPACT(x,y)

## End(Not run)
```

# Index

IMPACT, [1](#)