XV CONGRESO DE METODOLOGIA DE LAS CIENCIAS SOCIALES Y DE LA SALUD

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UAB aemcco

SubscaleExplorer: Un paquete de R para la gestión y descripción de subescalas psicométricas

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UAB

La instalación

```
if (!require('devtools'))
{
  install.packages('devtools');
  library(devtools);
}
```


```
## Loading required package: devtools
```

```
devtools::install_github("AnguloB/SubscaleExplorer")
```

getscale()

getscale {SubscaleExplorer} R Documentation

Get subscales from a dataframe or matrix and a reference spreedsheet from excel

Usage

```
getscale(df, file,sheet=1,  column)
```

Arguments

df	Data frame or matrix
file	excel file (e.g "example.xlsx")
column	Column name (or number) for scale in excel (e.g "Subscale")
sheet	sheet number default 1

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Examples

```
#reference is an excel sheet with a colum "VariablesInput" which contains variable names of the data frame
getscale(df, "reference.xlsx", column="Subscales")
a<-unlist(output)
a<-data.frame((vapply(output,unlist,unlist(output[[1]]))))

for(i in 1:ncol(a)){
  assign(names(output)[i], a[[i]])
#remove innecessary objects
#rm(a,i, output)
}
```

getscale()

	A	B	C	D	E
1	VariablesInput	description	Questionnaire	Scale	VariablesAnalisis
2	id	id in access		socio	id
3	case	manual id		socio	case
4	language	language	socio	socio	language
5	sex	sex	socio	socio	sex
6	course	course	socio	socio	course
7	class	class	socio	socio	class
8	sport	sport practise	socio	socio	sport
9	teacher	teacher number	teacher	socio	teacher
10	clima1	fomenta aprendizaje y mejora	support	cs	cs4
11	clima2	confiar en nuestra capacidad de	support	cs	cs1
12	clima3	propone tareas y situaciones qu	thwarting	ct	ct1
13	clima4	situaciones que nos hacen sent	thwarting	ct	ct2
14	clima5	libertad para realizar las	support	as	as2
15	clima6	no da oportunidades demostra	thwarting	ct	ct4
16	clima7	propone actividades ajustadas	support	cs	cs2
17	clima8	hace sentir incompetentes	thwarting	ct	ct3
18	clima9	tiene en cuenta nuestra	support	as	as3
19	clima10	intenta consigamos obje	support	cs	cs3
20	clima11	favorece el buen ambiente	support	rs	rs2
21	clima12	es indiferente con nosotros	thwarting	rt	rt1
22	clima13	nos pregunta sobre prefe	support	as	as1
23	clima14	nos exige hacer las cosas de una	thwarting	at	at1
24	clima15	nos impide tomar decisiones	thwarting	at	at2
25	clima16	nos obliga a aceptar una forma	thwarting	at	at3
26	clima17	fomenta buenas relaciones entr	support	rs	rs1
27	clima18	fuerza una determinada maner	thwarting	at	at4

reference | database | +

VariablesInput

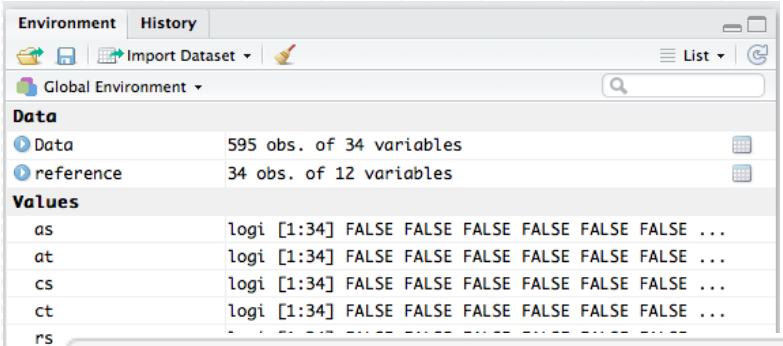
- Etiqueta fija
- Contiene nombre de las variables en BD

Agrupación

- Etiqueta flexible Contiene un valor por cada variable con la etiqueta del grupo al que pertenece

Se necesitan sólo 2 columnas en una hoja de calculo (.xlsx) y una base de datos activa en R

getscale()




```
as
```

```
##  [1] FALSE FALSE FALSE FALSE FALSE
## [12] FALSE  TRUE FALSE FALSE FALSE
## [23] FALSE FALSE FALSE FALSE  TRUE
## [34] FALSE
```

```
Data[as]
```

```
## # A tibble: 595 x 4
##       as2   as3   as1   as4
##     <dbl> <dbl> <dbl> <dbl>
##  1      3     3     5     4
##  2      1     5     5     5
##  3      5     3     3     3
##  4     NA     3     4     2
##  5      4     4    NA     4
##  6      4     4     2     3
##  7      4     3     3     3
##  8      1     4     1     3
##  9      3     3     1     1
## 10      2     3     1     1
## # ... with 585 more rows
```

missingness()

```
missingness(Data[as], pattern=TRUE, showNA=TRUE)
```

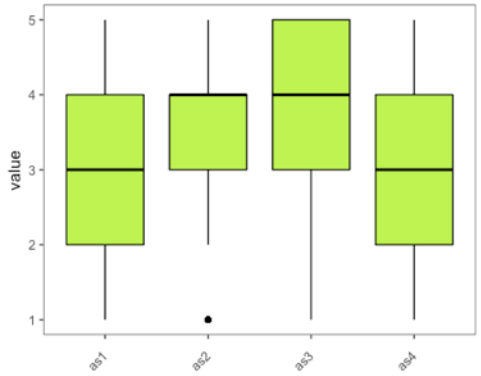
```
[1] "Missingness summary"
                              Description    Freq    Prop
1                         CASE MISSINGNESS
2                                         ------- -------
3            Cases with all items answered     582    0.98
4               Cases with incomplete data      13    0.02
5                                         ------- -------
6  Cases with some or all items answered      594       1
7      Cases with completely missing data       1       0
8                  ---------------------- ------- -------
9                         CELL MISSINGNESS
10                             n variables       4
11                               n cases       595
12                       n missing cells      17
13           Total cases x Total variables    2380
14          Proportion of cell missingness         0.00714
[1] "Total missing variable"
  variable na prop.na
1      as2  8   0.013
2      as3  3   0.005
3      as1  2   0.003
4      as4  4   0.007
```

```
id case with completely missing data
                                   555
```

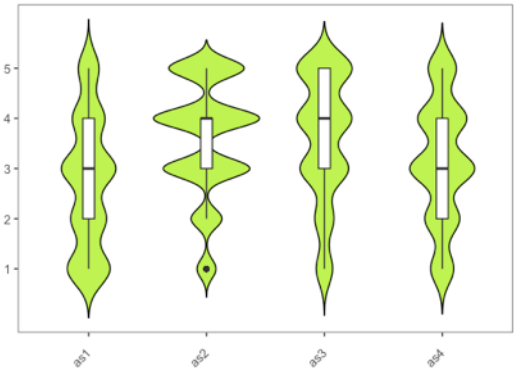
```
"Missing Data Pattern"
          n as1 as3 as4 as2    NA
        582   1   1   1   1     0
          6   1   1   1   0     1
          1   1   0   1   1     1
          1   0   1   1   1     1
          3   1   1   0   1     1
          1   1   0   1   0     2
          1   0   0   0   0     4
         --  --  --  --  -- -- --
NA summary    2   3   4   8    17
```

Gráficos

```
boxPlot(Data[as])
```




```
violinPlot(Data[as])
```

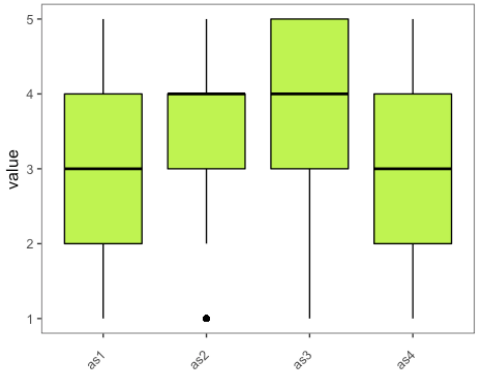


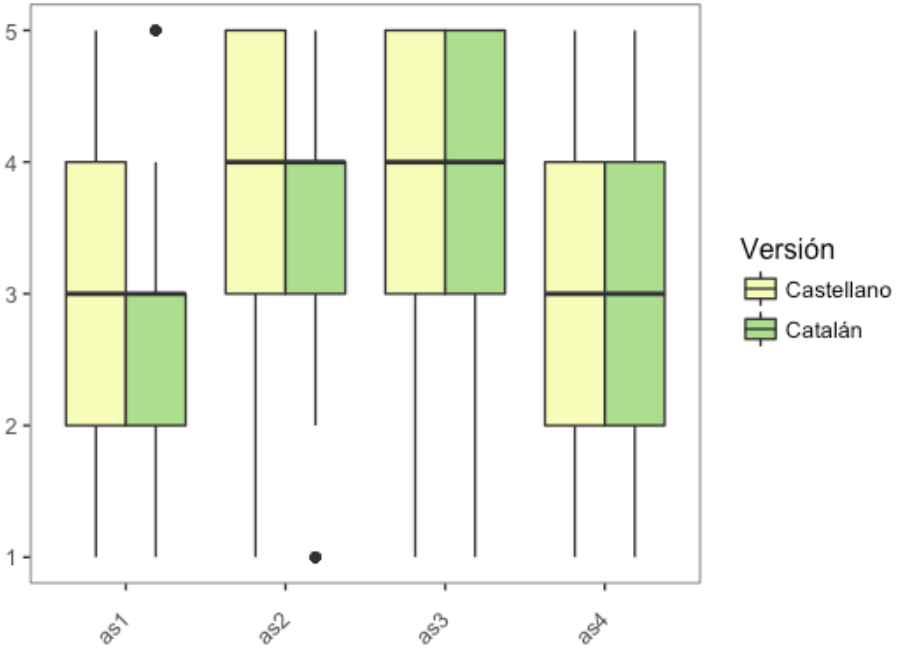

```
freqbubble(obj)
```

boxPlot()

```
boxPlot(Data[as], group= Data$language)
```

```
boxPlot(Data[as])
```





Familia "frequencies"

```
obj<-frequencies(Data[as], prop=TRUE)
```

```
freqbubble(obj)
```

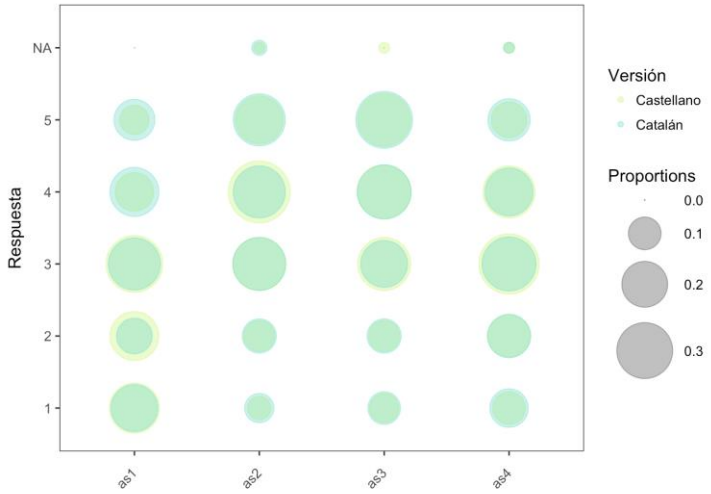
```
##          value
## variable    1    2    3    4    5 <NA>
##      as2 0.06 0.10 0.27 0.33 0.23 0.01
##      as3 0.08 0.10 0.25 0.28 0.28 0.01
##      as1 0.23 0.19 0.29 0.17 0.11 0.00
##      as4 0.11 0.17 0.32 0.24 0.14 0.01
```

Familia “frequencies”

```
obj<-frequencies(Data[as], prop=TRUE, group=Data$language)
```

```
freqbubbleRepeated(obj$Catalán, obj$Castellano, color1 = "#BEF351", color2 = "#40D2C4", Wave1 = "Castellano",
Wave2 = "Catalán", bubbleSize=c(0,20), xOrder=TRUE, legendLab="Versión", y.lab="Respuesta")
```

```
## group: Castellano
##          value
## variable    1    2    3    4    5 <NA>
##       as2 0.08 0.11 0.27 0.26 0.26 0.02
##       as3 0.10 0.11 0.21 0.28 0.31 0.00
##       as1 0.21 0.12 0.26 0.23 0.16 0.00
##       as4 0.14 0.18 0.28 0.22 0.17 0.01
## ----------------------------------------
------------
## group: Catalán
##          value
## variable    1    2    3    4    5 <NA>
##       as2 0.05 0.09 0.27 0.37 0.22 0.01
##       as3 0.08 0.09 0.27 0.28 0.27 0.01
##       as1 0.24 0.23 0.31 0.14 0.08 0.00
##       as4 0.10 0.17 0.35 0.26 0.12 0.01
```



github.com/AnguloB/SubscaleExplorer

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