# 03-people

Curso de Estadística Descriptiva

24/12/2018

## Ejemplo de color de ojos y de pelo

```
HairEyeColor
```

```
## , , Sex = Male
##
##        Eye
## Hair    Brown Blue Hazel Green
##   Black    32   11    10     3
##   Brown    53   50    25    15
##   Red      10   10     7     7
##   Blond     3   30     5     8
##
## , , Sex = Female
##
##        Eye
## Hair    Brown Blue Hazel Green
##   Black    36    9     5     2
##   Brown    66   34    29    14
##   Red      16    7     7     7
##   Blond     4   64     5     8
```

```
str(HairEyeColor)
```

```
##  'table' num [1:4, 1:4, 1:2] 32 53 10 3 11 50 10 30 10 25 ...
##  - attr(*, "dimnames")=List of 3
##   ..$ Hair: chr [1:4] "Black" "Brown" "Red" "Blond"
##   ..$ Eye : chr [1:4] "Brown" "Blue" "Hazel" "Green"
##   ..$ Sex : chr [1:2] "Male" "Female"
```

```
head(HairEyeColor)
```

```
## [1] 32 53 10  3 11 50
```

```
sum(HairEyeColor) -> total
```

El total de individuos de la tabla de datos es 592.

```r
prop.table(HairEyeColor, margin = 3)
```

```
## , , Sex = Male
##
##        Eye
## Hair          Brown        Blue       Hazel       Green
##   Black 0.114695341 0.039426523 0.035842294 0.010752688
##   Brown 0.189964158 0.179211470 0.089605735 0.053763441
##   Red   0.035842294 0.035842294 0.025089606 0.025089606
##   Blond 0.010752688 0.107526882 0.017921147 0.028673835
##
## , , Sex = Female
##
##        Eye
## Hair          Brown        Blue       Hazel       Green
##   Black 0.115015974 0.028753994 0.015974441 0.006389776
##   Brown 0.210862620 0.108626198 0.092651757 0.044728435
##   Red   0.051118211 0.022364217 0.022364217 0.022364217
##   Blond 0.012779553 0.204472843 0.015974441 0.025559105
```

```r
prop.table(HairEyeColor, margin = c(1,2))
```

```
## , , Sex = Male
##
##        Eye
## Hair        Brown      Blue     Hazel     Green
##   Black 0.4705882 0.5500000 0.6666667 0.6000000
##   Brown 0.4453782 0.5952381 0.4629630 0.5172414
##   Red   0.3846154 0.5882353 0.5000000 0.5000000
##   Blond 0.4285714 0.3191489 0.5000000 0.5000000
##
## , , Sex = Female
##
##        Eye
## Hair        Brown      Blue     Hazel     Green
##   Black 0.5294118 0.4500000 0.3333333 0.4000000
##   Brown 0.5546218 0.4047619 0.5370370 0.4827586
##   Red   0.6153846 0.4117647 0.5000000 0.5000000
##   Blond 0.5714286 0.6808511 0.5000000 0.5000000
```

```r
# aperm -> Me permite cambiar el orden de las columnas
aperm(HairEyeColor, perm = c("Sex", "Hair", "Eye"))
```

```
## , , Eye = Brown
##
##         Hair
## Sex      Black Brown Red Blond
##   Male      32    53  10     3
##   Female    36    66  16     4
##
## , , Eye = Blue
##
```

```
##         Hair
## Sex      Black Brown Red Blond
##   Male      11    50  10    30
##   Female     9    34   7    64
##
## , , Eye = Hazel
##
##         Hair
## Sex      Black Brown Red Blond
##   Male      10    25   7     5
##   Female     5    29   7     5
##
## , , Eye = Green
##
##         Hair
## Sex      Black Brown Red Blond
##   Male       3    15   7     8
##   Female     2    14   7     8
```

```
library(kableExtra)
kable(HairEyeColor)
```

| Hair | Eye | Sex | Freq |
|---|---|---|---|
| Black | Brown | Male | 32 |
| Brown | Brown | Male | 53 |
| Red | Brown | Male | 10 |
| Blond | Brown | Male | 3 |
| Black | Blue | Male | 11 |
| Brown | Blue | Male | 50 |
| Red | Blue | Male | 10 |
| Blond | Blue | Male | 30 |
| Black | Hazel | Male | 10 |
| Brown | Hazel | Male | 25 |
| Red | Hazel | Male | 7 |
| Blond | Hazel | Male | 5 |
| Black | Green | Male | 3 |
| Brown | Green | Male | 15 |
| Red | Green | Male | 7 |
| Blond | Green | Male | 8 |
| Black | Brown | Female | 36 |
| Brown | Brown | Female | 66 |
| Red | Brown | Female | 16 |
| Blond | Brown | Female | 4 |
| Black | Blue | Female | 9 |
| Brown | Blue | Female | 34 |
| Red | Blue | Female | 7 |
| Blond | Blue | Female | 64 |
| Black | Hazel | Female | 5 |
| Brown | Hazel | Female | 29 |
| Red | Hazel | Female | 7 |
| Blond | Hazel | Female | 5 |
| Black | Green | Female | 2 |
| Brown | Green | Female | 14 |
| Red | Green | Female | 7 |
| Blond | Green | Female | 8 |

```
library(xtable)
sex = factor(c("H", "M", "M", "M", "H", "H", "M", "M"))
ans = factor(c("S", "N", "S", "S", "S", "N", "N", "S"))

xtable(table(sex, ans))
```

% latex table generated in R 3.6.3 by xtable 1.8-4 package % Tue Jul 14 12:28:56 2020

| | N | S |
|---|---|---|
| H | 1 | 2 |
| M | 2 | 3 |