Taller #1 - Estadistica para la analítica de datos

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En la librería car podrá encontrar una base de datos llamada Chile, la cual proporciona parcialmente, información demográfica de Chile. La base de datos tiene 2700 filas y 8 columnas.Los datos provienen de una encuesta nacional de hogares llevada a cabo en abril y mayo de 1988 por FLACSO / Chile. Hay algunos datos que faltan.

```
## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G14 / R14C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G29 / R29C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G77 / R77C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G114 / R114C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G144 / R144C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G200 / R200C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G251 / R251C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G297 / R297C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G454 / R454C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G643 / R643C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G646 / R646C7: got 'NA'
```

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## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G672 / R672C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G685 / R685C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G727 / R727C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H729 / R729C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G764 / R764C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G774 / R774C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G775 / R775C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G789 / R789C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G807 / R807C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G819 / R819C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H819 / R819C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G833 / R833C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G841 / R841C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G842 / R842C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G864 / R864C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G869 / R869C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H869 / R869C8: got 'NA'
```

```
## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G907 / R907C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G909 / R909C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G910 / R910C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G914 / R914C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G928 / R928C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G939 / R939C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1071 / R1071C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1073 / R1073C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1098 / R1098C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1115 / R1115C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1118 / R1118C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1122 / R1122C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1126 / R1126C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1130 / R1130C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1155 / R1155C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1168 / R1168C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1169 / R1169C8: got 'NA'
```

```
## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1174 / R1174C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1256 / R1256C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1259 / R1259C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1295 / R1295C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1306 / R1306C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1325 / R1325C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1385 / R1385C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1396 / R1396C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1431 / R1431C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1463 / R1463C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1542 / R1542C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1545 / R1545C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1557 / R1557C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1557 / R1557C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1570 / R1570C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1570 / R1570C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1582 / R1582C7: got 'NA'
```

```
## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1649 / R1649C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1656 / R1656C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1687 / R1687C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1689 / R1689C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1723 / R1723C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1747 / R1747C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1749 / R1749C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1773 / R1773C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1775 / R1775C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1775 / R1775C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1776 / R1776C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1778 / R1778C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1778 / R1778C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1790 / R1790C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1796 / R1796C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in E1811 / R1811C5: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1843 / R1843C7: got 'NA'
```

```
## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1858 / R1858C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G1868 / R1868C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H1989 / R1989C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2025 / R2025C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2041 / R2041C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2061 / R2061C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2065 / R2065C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2083 / R2083C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2114 / R2114C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2179 / R2179C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2224 / R2224C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2244 / R2244C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2439 / R2439C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2442 / R2442C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2444 / R2444C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2445 / R2445C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2454 / R2454C7: got 'NA'
```

```
## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2459 / R2459C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2471 / R2471C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2487 / R2487C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2546 / R2546C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2548 / R2548C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in H2549 / R2549C8: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2556 / R2556C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2562 / R2562C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2566 / R2566C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2568 / R2568C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2571 / R2571C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2583 / R2583C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2601 / R2601C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2613 / R2613C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2625 / R2625C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2628 / R2628C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2630 / R2630C7: got 'NA'
```

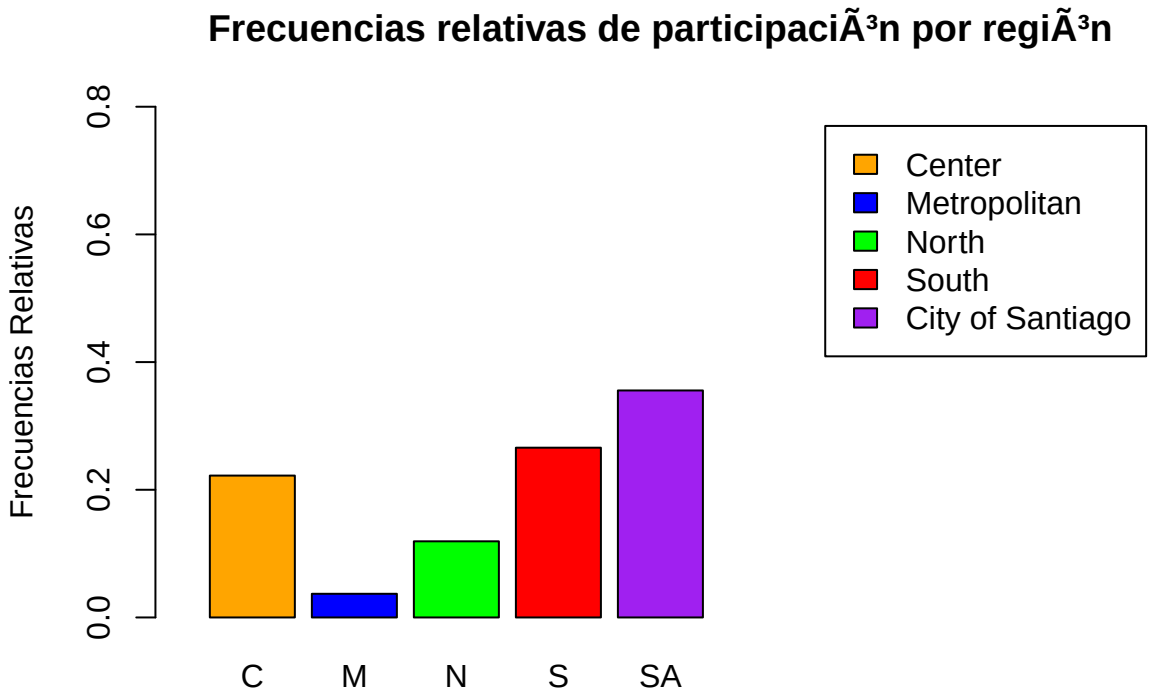
```
## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2641 / R2641C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2642 / R2642C7: got 'NA'

## Warning in read_fun(path = enc2native(normalizePath(path)), sheet_i = sheet, :
## Expecting numeric in G2643 / R2643C7: got 'NA'
```

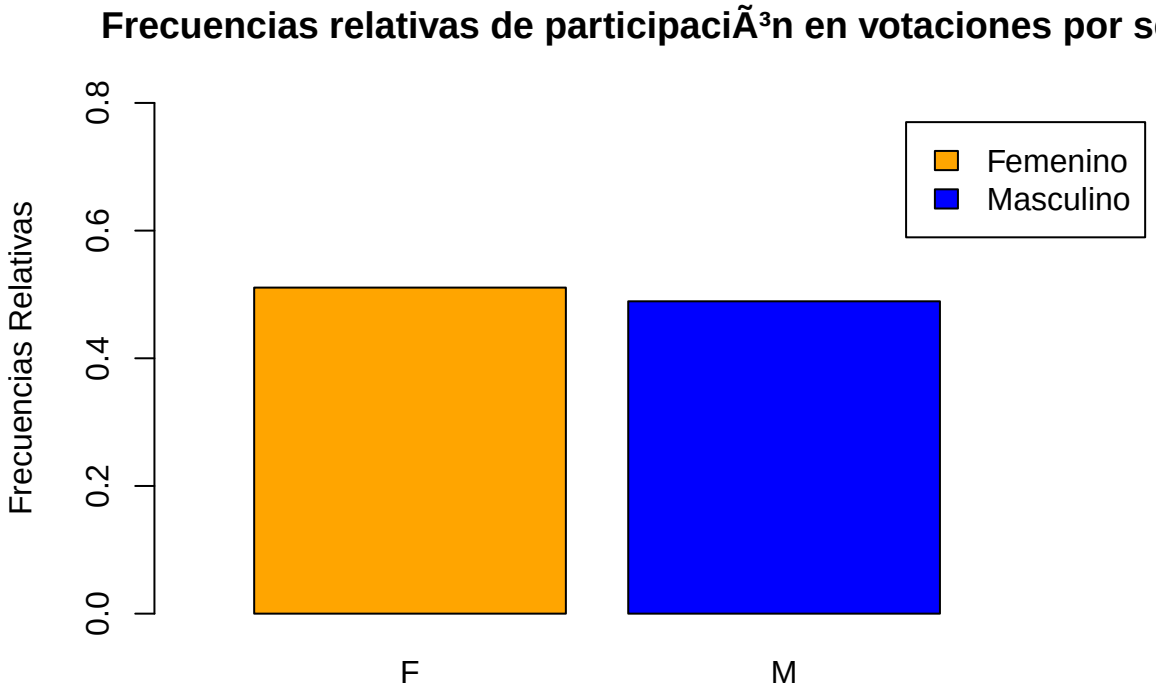
a) Proporcione un resumen descriptivo univariado de esta información y b) Desarrolle gráficos pertinentes según el tipo de variable.

```
##   Region_ Freq porcentaje cum_frequencia cum_porcentaje
## 1       C  600 0.22222222            600      0.2222222
## 2       M  100 0.03703704            700      0.2592593
## 3       N  322 0.11925926           1022      0.3785185
## 4       S  718 0.26592593           1740      0.6444444
## 5      SA  960 0.35555556           2700      1.0000000
```



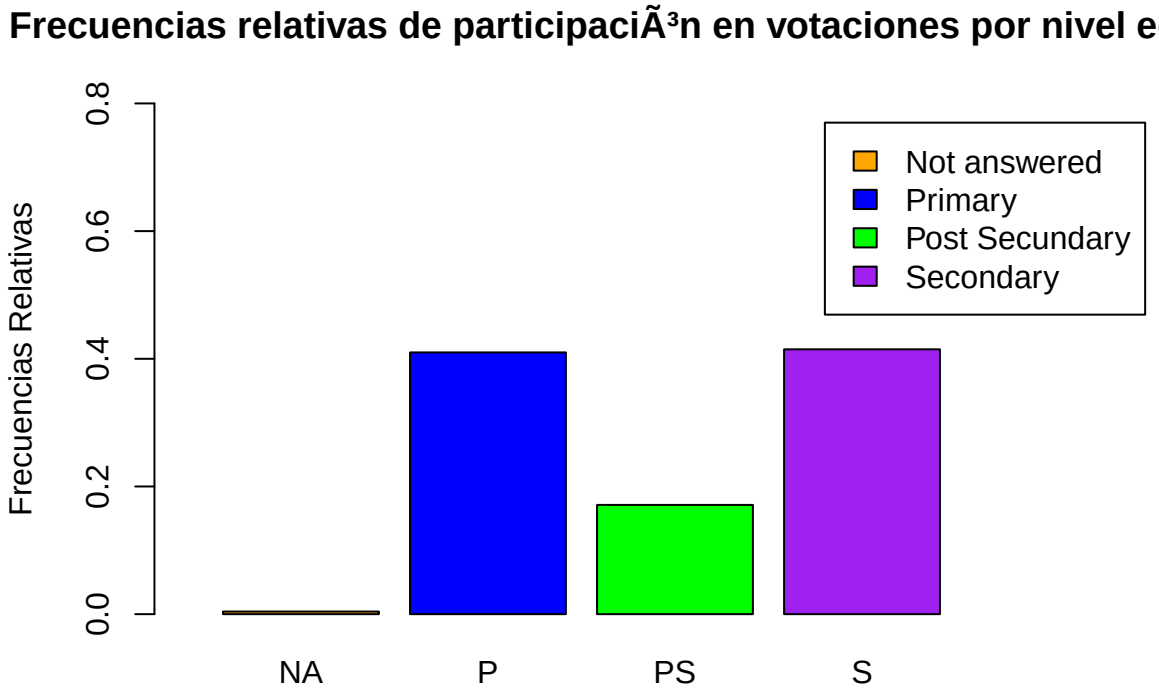
Para el caso de la variable Region se puede identificar que las region de City of Santiago (n= 960) es la que tuvo mayor participación en las votaciones, seguida por la región sur (n=718) y la región center (n=600)

```
##   Sexo_ Freq porcentaje cum_frequencia cum_porcentaje
## 1     F 1379  0.5107407           1379      0.5107407
## 2     M 1321  0.4892593           2700      1.0000000
```



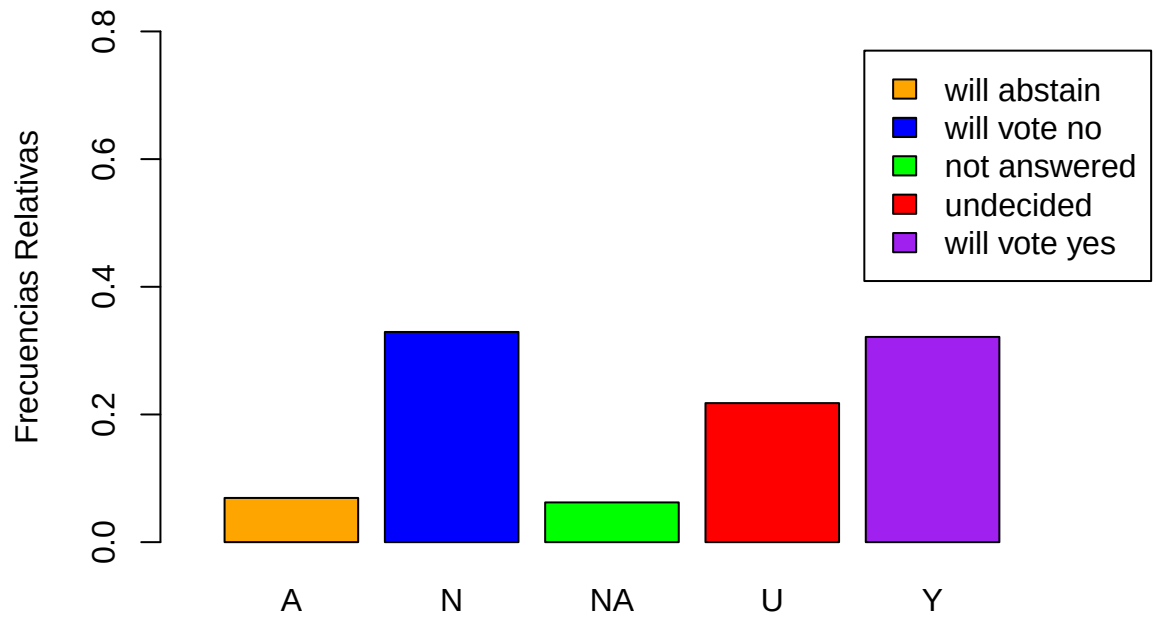
Para el caso de la variable cualitativa sexo pudemos observar que la proporsión de votantes hombres y mujeres es muy similar con una leve proporsión mayor en participación de mujeres

```
##   Educacion_ Freq  porcentaje cum_frequencia cum_porcentaje
## 1         NA   11 0.004074074             11    0.004074074
## 2          P 1107 0.410000000           1118    0.414074074
## 3         PS  462 0.171111111           1580    0.585185185
## 4          S 1120 0.414814815           2700    1.000000000
```



para el caso de la variable educación se puede identificar que la proporsion de votantes es mayor en personas con un nivel educativo de "primaria" y "secundaria", por su parte "post secundaria" cuanta con una muy baja participación en las elecciones de chile

```
##   Vote_ Freq porcentaje cum_frequencia cum_porcentaje
## 1     A  187 0.06925926            187     0.06925926
## 2     N  889 0.32925926           1076     0.39851852
## 3    NA  168 0.06222222           1244     0.46074074
## 4     U  588 0.21777778           1832     0.67851852
## 5     Y  868 0.32148148           2700     1.00000000
```



Respecto a la variable relacionada con la intensiÃ³n de voto por el presidente "pinochet" se encuentra que las personas que votarÃ¡n SI (33%) son muy cercanas a las personas que votarÃ¡n NO (32%)

==========

c) Desagregando esta base de datos, solo para hogares del Norte y del Sur, proporcione un análisis bivariado (tabulación cruzada y un diagrama de barras comparativas) de las variables Educación y Voto.

#Análisis Bivariado Educación y voto

```
## Warning: package 'dplyr' was built under R version 4.1.3
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
##
##
##    Cell Contents
## |-------------------------|
## |                       N |
## | Chi-square contribution |
## |           N / Row Total |
## |           N / Col Total |
## |         N / Table Total |
## |-------------------------|
##
##
## Total Observations in Table:  1040
##
##
##                            | Chile_NteySur$vote
## Chile_NteySur$education    |         A |         N |        NA |         U |         Y | Row Total |
## ---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
##                         NA |         0 |         1 |         0 |         0 |         1 |         2 |
##                            |     0.138 |     0.253 |     0.092 |     0.373 |     0.057 |           |
##                            |     0.000 |     0.500 |     0.000 |     0.000 |     0.500 |     0.002 |
##                            |     0.000 |     0.003 |     0.000 |     0.000 |     0.002 |           |
##                            |     0.000 |     0.001 |     0.000 |     0.000 |     0.001 |           |
## ---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
##                          P |        23 |        99 |        23 |       107 |       227 |       479 |
##                            |     3.114 |    14.884 |     0.036 |     3.486 |     7.713 |           |
##                            |     0.048 |     0.207 |     0.048 |     0.223 |     0.474 |     0.461 |
##                            |     0.319 |     0.313 |     0.479 |     0.552 |     0.554 |           |
##                            |     0.022 |     0.095 |     0.022 |     0.103 |     0.218 |           |
## ---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
##                         PS |        14 |        80 |         8 |        20 |        51 |       173 |
##                            |     0.342 |    14.319 |     0.000 |     4.666 |     4.339 |           |
##                            |     0.081 |     0.462 |     0.046 |     0.116 |     0.295 |     0.166 |
##                            |     0.194 |     0.253 |     0.167 |     0.103 |     0.124 |           |
##                            |     0.013 |     0.077 |     0.008 |     0.019 |     0.049 |           |
## ---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
##                          S |        35 |       136 |        17 |        67 |       131 |       386 |
##                            |     2.564 |     2.986 |     0.037 |     0.348 |     2.946 |           |
##                            |     0.091 |     0.352 |     0.044 |     0.174 |     0.339 |     0.371 |
##                            |     0.486 |     0.430 |     0.354 |     0.345 |     0.320 |           |
##                            |     0.034 |     0.131 |     0.016 |     0.064 |     0.126 |           |
## ---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
##             Column Total   |        72 |       316 |        48 |       194 |       410 |      1040 |
##                            |     0.069 |     0.304 |     0.046 |     0.187 |     0.394 |           |
## ---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
##
##
```

Conclusiones De acuerdo a la anterior tabla de contingencia encontramos que el mayor valor chi cuadrado se encuentra entre un nivel de estudio de primaria (P) y la intensión de votar NO por pinochet como presidente. Por otro lado se evidencia que dicha relacion entre la intensión de votar NO por pinochet como presidente es alta en personas con un nivel educativo de PostSecundaria (PS).

En otro de los cruces de variable en donde encontramos un chi cuadrado superior es en la intensión de voto de respaldar a Pinochet con el SI en personas con un nivel educativo de primaria (P)

Actividad # 2

Una muestra de 226 personas mayores que viven en Burdeos (Gironde, suroeste de Francia) fueron entrevistados en 2000 para un estudio nutricional (base de datos: nutrition_elderly). La siguiente tabla presenta la descripción de las variables de estudio.

Proporcione un resumen estadístico descriptivo completo de dos variables cualitativas y dos cuantitativas, solo con aquellas personas mayores de 79 de género femenino.

En cada uno de los casos, proporcione los análisis, conclusiones y recomendaciones analíticas.

Tabla de contingencia cruzada

```
##
##
##    Cell Contents
## |-------------------------|
## |                       N |
## | Chi-square contribution |
## |           N / Row Total |
## |           N / Col Total |
## |         N / Table Total |
## |-------------------------|
##
##
## Total Observations in Table:  23
##
##
##                  | Nutrition_2$status
## Nutrition_2$fat |         1 |         2 |         3 | Row Total |
## ----------------|-----------|-----------|-----------|-----------|
##               1 |         0 |         0 |         1 |         1 |
##                 |     0.870 |     0.087 |    21.043 |           |
##                 |     0.000 |     0.000 |     1.000 |     0.043 |
##                 |     0.000 |     0.000 |     1.000 |           |
##                 |     0.000 |     0.000 |     0.043 |           |
## ----------------|-----------|-----------|-----------|-----------|
##               2 |         3 |         0 |         0 |         3 |
##                 |     0.059 |     0.261 |     0.130 |           |
##                 |     1.000 |     0.000 |     0.000 |     0.130 |
##                 |     0.150 |     0.000 |     0.000 |           |
##                 |     0.130 |     0.000 |     0.000 |           |
## ----------------|-----------|-----------|-----------|-----------|
##               3 |         8 |         0 |         0 |         8 |
##                 |     0.157 |     0.696 |     0.348 |           |
##                 |     1.000 |     0.000 |     0.000 |     0.348 |
##                 |     0.400 |     0.000 |     0.000 |           |
##                 |     0.348 |     0.000 |     0.000 |           |
## ----------------|-----------|-----------|-----------|-----------|
##               4 |         3 |         2 |         0 |         5 |
##                 |     0.418 |     5.635 |     0.217 |           |
##                 |     0.600 |     0.400 |     0.000 |     0.217 |
```

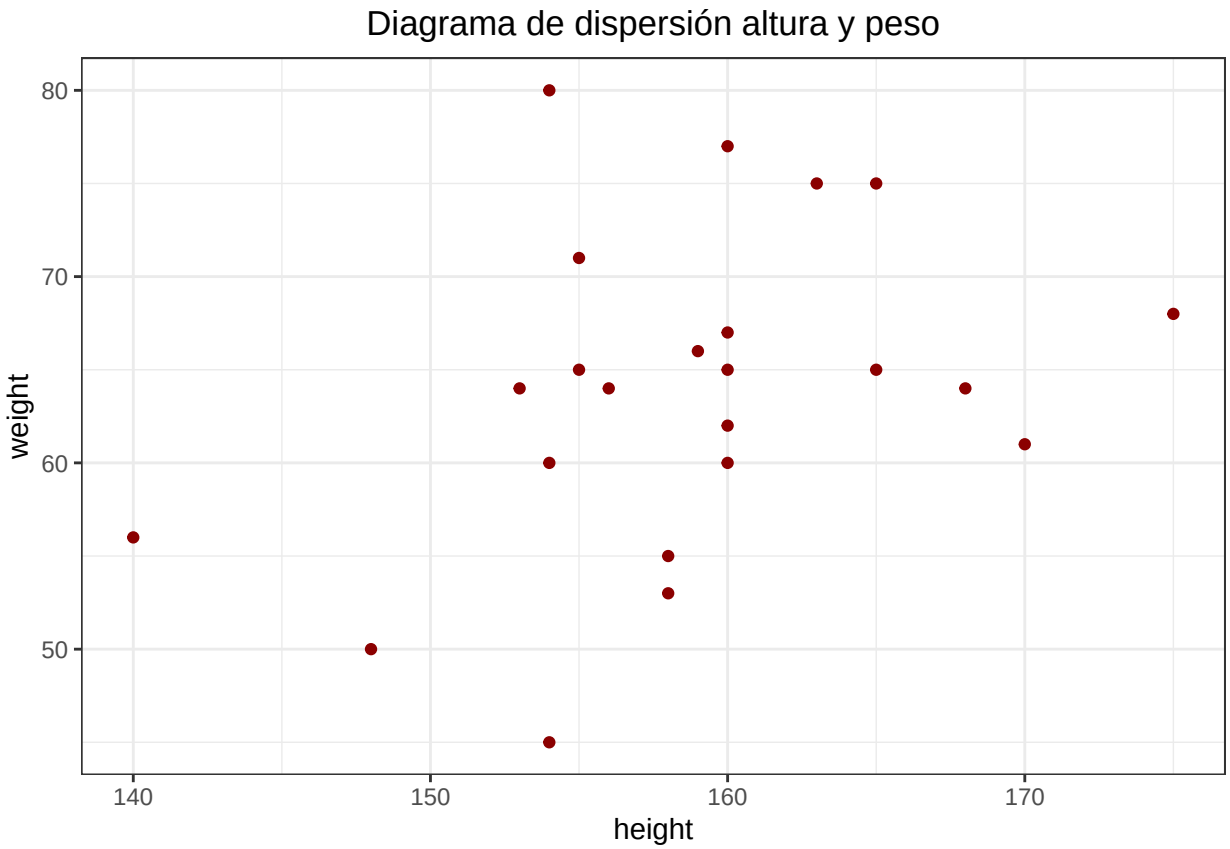
```
##                 |     0.150 |     1.000 |     0.000 |           |
##                 |     0.130 |     0.087 |     0.000 |           |
## ----------------|-----------|-----------|-----------|-----------|
##               5 |         3 |         0 |         0 |         3 |
##                 |     0.059 |     0.261 |     0.130 |           |
##                 |     1.000 |     0.000 |     0.000 |     0.130 |
##                 |     0.150 |     0.000 |     0.000 |           |
##                 |     0.130 |     0.000 |     0.000 |           |
## ----------------|-----------|-----------|-----------|-----------|
##               6 |         3 |         0 |         0 |         3 |
##                 |     0.059 |     0.261 |     0.130 |           |
##                 |     1.000 |     0.000 |     0.000 |     0.130 |
##                 |     0.150 |     0.000 |     0.000 |           |
##                 |     0.130 |     0.000 |     0.000 |           |
## ----------------|-----------|-----------|-----------|-----------|
##    Column Total |        20 |         2 |         1 |        23 |
##                 |     0.870 |     0.087 |     0.043 |           |
## ----------------|-----------|-----------|-----------|-----------|
##
##
```

Coeficiente de Correlación de Pearson:

```
##
## Attaching package: 'MASS'

## The following object is masked from 'package:dplyr':
##
##     select

## Warning: package 'ggplot2' was built under R version 4.1.3
```




```
## [1] 0.3511394
```

```
## [1] 0.3511394
```

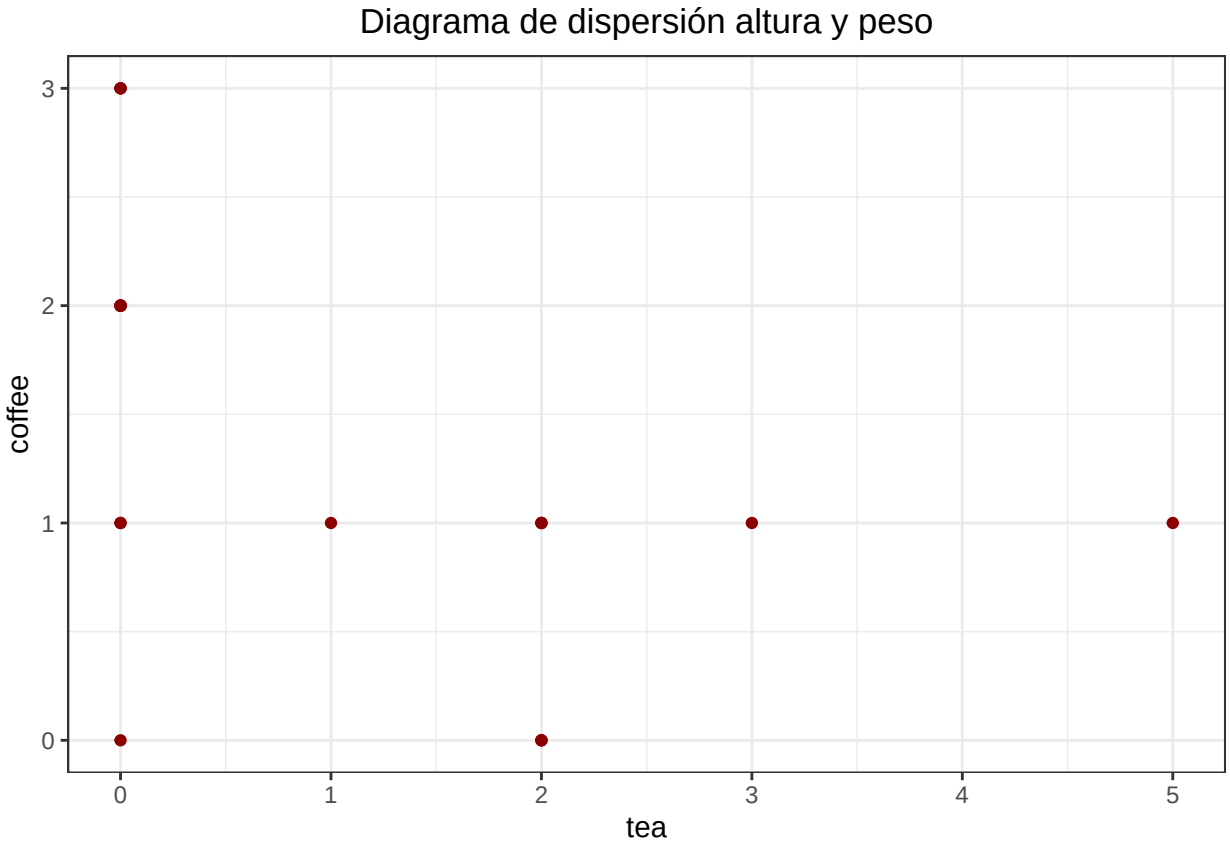


Diagrama de dispersión altura y peso
coffee
tea
0
1
2
3
4
5