TP2_DIALLOAissatouSega

Aissatou Sega DIALLO

2025-01-22

```r
# Chargement de package
library(dplyr)
```

```
## Warning: le package 'dplyr' a été compilé avec la version R 4.3.1
```

```
##
## Attachement du package : 'dplyr'
```

```
## Les objets suivants sont masqués depuis 'package:stats':
##
##     filter, lag
```

```
## Les objets suivants sont masqués depuis 'package:base':
##
##     intersect, setdiff, setequal, union
```

```r
library(haven)
```

```
## Warning: le package 'haven' a été compilé avec la version R 4.3.3
```

```r
library(base)
```

```r
# Importation des bases
Menage <- read.csv("C:/Formation ISE/ISE 1/Logiciel R/Projet-statistique-sous-R/TP 2/TP2_DIALLO_Aissatou
Individus <- read.csv("C:/Formation ISE/ISE 1/Logiciel R/Projet-statistique-sous-R/TP 2/TP2_DIALLO_Aissa
```

```r
#Voir la structure des bases
str(Individus)
```

```
## 'data.frame':    63530 obs. of  56 variables:
##  $ country      : chr  "SEN" "SEN" "SEN" "SEN" ...
##  $ year         : int  2021 2021 2021 2021 2021 2021 2021 2021 2021 2021 ...
##  $ vague        : int  2 2 2 2 2 2 2 2 2 2 ...
##  $ hhid         : int  201 201 201 201 201 201 201 201 201 203 ...
##  $ grappe       : int  2 2 2 2 2 2 2 2 2 2 ...
##  $ menage       : int  1 1 1 1 1 1 1 1 1 3 ...
##  $ numind       : int  1 2 3 6 7 8 13 14 16 2 ...
##  $ zae          : int  11 11 11 11 11 11 11 11 11 11 ...
##  $ zaemil       : int  11 11 11 11 11 11 11 11 11 11 ...
```

```
## $ region       : int  1 1 1 1 1 1 1 1 1 1 ...
## $ departement  : int  11 11 11 11 11 11 11 11 11 11 ...
## $ commune      : chr  "MEDINA" "MEDINA" "MEDINA" "MEDINA" ...
## $ milieu       : int  1 1 1 1 1 1 1 1 1 1 ...
## $ hhweight     : num  290 290 290 290 290 ...
## $ resid        : int  1 1 1 1 1 1 1 1 1 1 ...
## $ sexe         : int  1 2 1 1 2 1 1 1 2 2 ...
## $ age          : int  88 78 57 44 37 29 9 6 1 47 ...
## $ lien         : int  1 2 3 3 3 3 5 5 5 1 ...
## $ mstat        : int  2 2 2 1 2 1 1 1 1 3 ...
## $ religion     : int  1 1 1 1 1 1 1 1 1 1 ...
## $ ethnie       : int  8 1 8 8 8 8 1 8 6 ...
## $ nation       : int  13 13 13 13 13 13 13 13 13 13 ...
## $ agemar       : int  28 18 35 NA 20 NA NA NA NA 30 ...
## $ mal30j       : int  0 1 0 0 0 0 0 0 0 0 ...
## $ aff30j       : int  NA 7 NA NA NA NA NA NA NA NA ...
## $ arrmal       : int  0 1 0 0 0 0 0 0 0 0 ...
## $ durarr       : int  NA 1 NA NA NA NA NA NA NA NA ...
## $ con30j       : int  NA 1 NA NA NA NA NA NA NA NA ...
## $ hos12m       : int  0 0 0 0 0 0 0 0 0 0 ...
## $ couvmal      : int  0 0 0 0 0 0 0 0 0 0 ...
## $ moustiq      : int  0 0 0 0 1 0 0 1 1 0 ...
## $ handit       : int  0 1 0 0 0 0 0 0 NA 0 ...
## $ handig       : int  0 0 0 0 0 0 0 0 NA 0 ...
## $ alfa         : int  1 0 1 1 1 1 1 0 0 1 ...
## $ alfa2        : int  1 0 1 1 1 1 1 0 0 1 ...
## $ scol         : int  0 0 0 0 0 0 1 1 0 0 ...
## $ educ_scol    : int  NA NA NA NA NA NA 2 2 NA NA ...
## $ educ_hi      : int  3 1 4 3 4 3 3 3 1 4 ...
## $ diplome      : int  0 0 1 0 1 0 0 0 0 1 ...
## $ telpor       : int  1 1 1 1 1 1 0 0 0 1 ...
## $ internet     : int  1 1 1 1 1 1 0 0 0 1 ...
## $ activ7j      : int  1 1 1 1 1 5 5 5 6 1 ...
## $ activ12m     : int  1 1 1 1 1 3 3 3 4 1 ...
## $ branch       : int  2 930 8 10 7 NA NA NA NA 11 ...
## $ sectins      : int  3 NA 5 3 3 NA NA NA NA 5 ...
## $ csp          : int  9 9 3 9 9 NA NA NA NA 5 ...
## $ volhor       : num  2750 NA 3000 1800 600 NA NA NA NA 792 ...
## $ salaire      : num  NA NA 1800000 NA NA NA NA NA NA 420000 ...
## $ emploi_sec   : int  0 0 0 0 0 0 0 0 0 0 ...
## $ sectins_sec  : int  NA NA NA NA NA NA NA NA NA NA ...
## $ csp_sec      : int  NA NA NA NA NA NA NA NA NA NA ...
## $ volhor_sec   : int  NA NA NA NA NA NA NA NA NA NA ...
## $ salaire_sec  : int  NA NA NA NA NA NA NA NA NA NA ...
## $ bank         : int  1 1 1 1 1 1 0 0 0 1 ...
## $ serviceconsult: int  NA 2 NA NA NA NA NA NA NA NA ...
## $ persconsult  : int  NA 1 NA NA NA NA NA NA NA NA ...
```

str(Menage)

```
## 'data.frame':    7120 obs. of  38 variables:
## $ country   : chr  "SEN" "SEN" "SEN" "SEN" ...
## $ hhid      : int  201 203 204 205 206 207 208 212 213 214 ...
## $ year      : int  2021 2021 2021 2021 2021 2021 2021 2021 2021 2021 ...
```

```
##  $ grappe    : int  2 2 2 2 2 2 2 2 2 2 ...
##  $ menage    : int  1 3 4 5 6 7 8 12 13 14 ...
##  $ vague     : int  2 2 2 2 2 2 2 2 2 2 ...
##  $ logem     : int  1 3 3 3 3 3 3 3 1 3 ...
##  $ mur       : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ toit      : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ sol       : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ eauboi_ss : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ eauboi_sp : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ elec_ac   : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ elec_ur   : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ elec_ua   : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ ordure    : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ toilet    : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ eva_toi   : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ eva_eau   : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ tv        : int  0 1 1 1 1 1 1 1 1 1 ...
##  $ fer       : int  0 0 1 0 1 0 0 0 0 0 ...
##  $ frigo     : int  1 1 1 0 1 1 1 0 1 0 ...
##  $ cuisin    : int  0 0 1 0 1 0 0 0 0 0 ...
##  $ ordin     : int  0 0 1 0 0 0 0 0 0 0 ...
##  $ decod     : int  0 1 1 1 0 0 0 0 0 0 ...
##  $ car       : int  0 0 1 0 0 0 0 0 0 0 ...
##  $ superf    : num  NA NA NA NA NA NA NA NA NA NA ...
##  $ grosrum   : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ petitrum  : int  5 0 0 0 0 0 0 0 0 0 ...
##  $ porc      : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ lapin     : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ volail    : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ sh_id_demo: int  0 1 0 0 0 0 0 0 0 1 ...
##  $ sh_co_natu: int  0 0 0 0 0 0 0 0 0 0 ...
##  $ sh_co_eco : int  1 0 0 0 0 0 0 1 0 1 ...
##  $ sh_id_eco : int  1 0 0 0 0 0 0 0 0 0 ...
##  $ sh_co_vio : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ sh_co_oth : int  0 0 0 0 0 0 0 0 0 0 ...
```

```r
#Voir les bases
View(Individus)
View(Menage)
```

```r
#Merger les bases pour pouvoir avoir des informations sur les chefs de ménage
Base_merge <- Individus %>%
  left_join(Menage, by = "hhid")
View(Base_merge)
```

```r
#Filtrer pour n'avoir que les chefs de ménage
chefs_menage <- dplyr::filter(Base_merge, lien == 1)
summary(chefs_menage)
```

```
##   country.x          year.x        vague.x          hhid
##  Length:7120       Min.   :2021   Min.   :1.000   Min.   :  201
##  Class :character  1st Qu.:2021   1st Qu.:1.000   1st Qu.:15208
##  Mode  :character  Median :2021   Median :2.000   Median :30103
```

```
##                              Mean   :2021   Mean   :1.503   Mean   :30082
##                              3rd Qu.:2021   3rd Qu.:2.000   3rd Qu.:45004
##                              Max.   :2021   Max.   :2.000   Max.   :59812
##
##     grappe.x        menage.x         numind           zae
##  Min.   :  2.0   Min.   : 1.000   Min.   : 1.00   Min.   : 1.000
##  1st Qu.:152.0   1st Qu.: 4.000   1st Qu.: 1.00   1st Qu.: 5.000
##  Median :301.0   Median : 7.000   Median : 1.00   Median : 7.000
##  Mean   :300.7   Mean   : 7.187   Mean   : 1.58   Mean   : 6.712
##  3rd Qu.:450.0   3rd Qu.:10.000   3rd Qu.: 1.00   3rd Qu.: 9.000
##  Max.   :598.0   Max.   :19.000   Max.   :53.00   Max.   :11.000
##
##     zaemil           region       departement       commune
##  Min.   : 1.000   Min.   : 1.000   Min.   : 11.00   Length:7120
##  1st Qu.: 5.000   1st Qu.: 3.000   1st Qu.: 33.00   Class :character
##  Median : 7.000   Median : 7.000   Median : 71.00   Mode  :character
##  Mean   : 7.144   Mean   : 6.799   Mean   : 69.91
##  3rd Qu.:10.000   3rd Qu.:10.000   3rd Qu.:102.00
##  Max.   :11.000   Max.   :14.000   Max.   :143.00
##
##     milieu          hhweight          resid         sexe            age
##  Min.   :1.000   Min.   :  17.73   Min.   :1   Min.   :1.000   Min.   : 16.00
##  1st Qu.:1.000   1st Qu.: 131.07   1st Qu.:1   1st Qu.:1.000   1st Qu.: 44.00
##  Median :1.000   Median : 221.81   Median :1   Median :1.000   Median : 54.00
##  Mean   :1.449   Mean   : 297.44   Mean   :1   Mean   :1.284   Mean   : 54.08
##  3rd Qu.:2.000   3rd Qu.: 380.29   3rd Qu.:1   3rd Qu.:2.000   3rd Qu.: 64.00
##  Max.   :2.000   Max.   :3081.51   Max.   :1   Max.   :2.000   Max.   :101.00
##
##      lien       mstat         religion         ethnie          nation
##  Min.   :1   Min.   :1.000   Min.   :1.000   Min.   : 1.000   Min.   : 4.00
##  1st Qu.:1   1st Qu.:2.000   1st Qu.:1.000   1st Qu.: 1.000   1st Qu.:13.00
##  Median :1   Median :2.000   Median :1.000   Median : 3.000   Median :13.00
##  Mean   :1   Mean   :2.805   Mean   :1.058   Mean   : 3.096   Mean   :12.95
##  3rd Qu.:1   3rd Qu.:3.000   3rd Qu.:1.000   3rd Qu.: 3.000   3rd Qu.:13.00
##  Max.   :1   Max.   :7.000   Max.   :5.000   Max.   :13.000   Max.   :18.00
##                                              NA's   :82
##     agemar          mal30j           aff30j          arrmal
##  Min.   :12.00   Min.   :0.0000   Min.   : 1.00   Min.   :0.0000
##  1st Qu.:20.00   1st Qu.:0.0000   1st Qu.: 6.00   1st Qu.:0.0000
##  Median :25.00   Median :0.0000   Median :11.00   Median :0.0000
##  Mean   :24.36   Mean   :0.3562   Mean   :10.43   Mean   :0.2242
##  3rd Qu.:28.00   3rd Qu.:1.0000   3rd Qu.:16.00   3rd Qu.:0.0000
##  Max.   :60.00   Max.   :1.0000   Max.   :20.00   Max.   :1.0000
##  NA's   :173                      NA's   :4584
##     durarr          con30j          hos12m           couvmal
##  Min.   :1.000   Min.   :0.000   Min.   :0.00000   Min.   :0.00000
##  1st Qu.:1.000   1st Qu.:0.000   1st Qu.:0.00000   1st Qu.:0.00000
##  Median :1.000   Median :1.000   Median :0.00000   Median :0.00000
##  Mean   :1.703   Mean   :0.604   Mean   :0.05056   Mean   :0.02781
##  3rd Qu.:2.000   3rd Qu.:1.000   3rd Qu.:0.00000   3rd Qu.:0.00000
##  Max.   :3.000   Max.   :1.000   Max.   :1.00000   Max.   :1.00000
##  NA's   :5524    NA's   :4584
##     moustiq          handit          handig            alfa
##  Min.   :0.0000   Min.   :0.0000   Min.   :0.00000   Min.   :0.0000
```

```
##    1st Qu.:1.0000    1st Qu.:0.0000    1st Qu.:0.00000    1st Qu.:0.0000
##    Median :1.0000    Median :0.0000    Median :0.00000    Median :1.0000
##    Mean   :0.7555    Mean   :0.2472    Mean   :0.08919    Mean   :0.5117
##    3rd Qu.:1.0000    3rd Qu.:0.0000    3rd Qu.:0.00000    3rd Qu.:1.0000
##    Max.   :1.0000    Max.   :1.0000    Max.   :1.00000    Max.   :1.0000
##
##      alfa2             scol            educ_scol         educ_hi
##    Min.   :0.0000    Min.   :0.000000   Min.   :3.000   Min.   :1.000
##    1st Qu.:0.0000    1st Qu.:0.000000   1st Qu.:7.000   1st Qu.:1.000
##    Median :0.0000    Median :0.000000   Median :8.000   Median :1.000
##    Mean   :0.4947    Mean   :0.002247   Mean   :7.188   Mean   :2.112
##    3rd Qu.:1.0000    3rd Qu.:0.000000   3rd Qu.:8.000   3rd Qu.:3.000
##    Max.   :1.0000    Max.   :1.000000   Max.   :8.000   Max.   :9.000
##                                         NA's   :7104
##     diplome           telpor            internet          activ7j
##    Min.   : 0.0000   Min.   :0.0000    Min.   :0.0000   Min.   :1.000
##    1st Qu.: 0.0000   1st Qu.:1.0000    1st Qu.:0.0000   1st Qu.:1.000
##    Median : 0.0000   Median :1.0000    Median :0.0000   Median :1.000
##    Mean   : 0.5622   Mean   :0.9146    Mean   :0.4537   Mean   :2.067
##    3rd Qu.: 0.0000   3rd Qu.:1.0000    3rd Qu.:1.0000   3rd Qu.:5.000
##    Max.   :10.0000   Max.   :1.0000    Max.   :1.0000   Max.   :5.000
##
##     activ12m          branch            sectins           csp
##    Min.   :1.000    Min.   :  1.00    Min.   :1.000    Min.   : 1.000
##    1st Qu.:1.000    1st Qu.:  1.00    1st Qu.:3.000    1st Qu.: 9.000
##    Median :1.000    Median :  5.00    Median :3.000    Median : 9.000
##    Mean   :1.382    Mean   :  6.36    Mean   :2.937    Mean   : 7.717
##    3rd Qu.:1.000    3rd Qu.:  8.00    3rd Qu.:3.000    3rd Qu.: 9.000
##    Max.   :3.000    Max.   :930.00    Max.   :6.000    Max.   :10.000
##                     NA's   :1838      NA's   :1359     NA's   :1326
##     volhor           salaire           emploi_sec        sectins_sec
##    Min.   :   0.5   Min.   :       0   Min.   :0.0000   Min.   :1.000
##    1st Qu.: 800.0   1st Qu.:  900000   1st Qu.:0.0000   1st Qu.:3.000
##    Median :1500.0   Median : 1440000   Median :0.0000   Median :3.000
##    Mean   :1653.2   Mean   : 2126083   Mean   :0.3322   Mean   :3.008
##    3rd Qu.:2400.0   3rd Qu.: 2771416   3rd Qu.:1.0000   3rd Qu.:3.000
##    Max.   :4200.0   Max.   :46080000   Max.   :1.0000   Max.   :6.000
##    NA's   :1939     NA's   :5816                        NA's   :4755
##     csp_sec          volhor_sec        salaire_sec         bank
##    Min.   : 1.000   Min.   :   1.0    Min.   :       0   Min.   :0.0000
##    1st Qu.: 9.000   1st Qu.: 360.0    1st Qu.: 217500   1st Qu.:1.0000
##    Median : 9.000   Median : 616.0    Median : 572000   Median :1.0000
##    Mean   : 8.668   Mean   : 754.5    Mean   : 665722   Mean   :0.7994
##    3rd Qu.: 9.000   3rd Qu.:1011.5    3rd Qu.: 885000   3rd Qu.:1.0000
##    Max.   :10.000   Max.   :4032.0    Max.   :3900000   Max.   :1.0000
##    NA's   :4755     NA's   :5969      NA's   :6986
##   serviceconsult   persconsult     country.y            year.y
##    Min.   :1.000   Min.   :1.000   Length:7120        Min.   :2021
##    1st Qu.:2.000   1st Qu.:1.000   Class :character   1st Qu.:2021
##    Median :2.000   Median :2.000   Mode  :character   Median :2021
##    Mean   :2.605   Mean   :2.489                      Mean   :2021
##    3rd Qu.:4.000   3rd Qu.:4.000                      3rd Qu.:2021
##    Max.   :4.000   Max.   :4.000                      Max.   :2021
##    NA's   :4584    NA's   :4584
```

```
##     grappe.y        menage.y         vague.y          logem
## Min.   :  2.0   Min.   : 1.000   Min.   :1.000   Min.   :1.000
## 1st Qu.:152.0   1st Qu.: 4.000   1st Qu.:1.000   1st Qu.:1.000
## Median :301.0   Median : 7.000   Median :2.000   Median :2.000
## Mean   :300.7   Mean   : 7.187   Mean   :1.503   Mean   :1.761
## 3rd Qu.:450.0   3rd Qu.:10.000   3rd Qu.:2.000   3rd Qu.:2.000
## Max.   :598.0   Max.   :19.000   Max.   :2.000   Max.   :4.000
##
##      mur             toit             sol           eauboi_ss
## Min.   :0.0000   Min.   :0.0000   Min.   :0.0000   Min.   :0.0000
## 1st Qu.:1.0000   1st Qu.:1.0000   1st Qu.:1.0000   1st Qu.:1.0000
## Median :1.0000   Median :1.0000   Median :1.0000   Median :1.0000
## Mean   :0.9055   Mean   :0.8666   Mean   :0.7791   Mean   :0.7735
## 3rd Qu.:1.0000   3rd Qu.:1.0000   3rd Qu.:1.0000   3rd Qu.:1.0000
## Max.   :1.0000   Max.   :1.0000   Max.   :1.0000   Max.   :1.0000
##
##    eauboi_sp          elec_ac          elec_ur          elec_ua
## Min.   :0.0000   Min.   :0.0000   Min.   :0.0000   Min.   :0.0000
## 1st Qu.:1.0000   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000
## Median :1.0000   Median :1.0000   Median :1.0000   Median :0.0000
## Mean   :0.7726   Mean   :0.6492   Mean   :0.6412   Mean   :0.1515
## 3rd Qu.:1.0000   3rd Qu.:1.0000   3rd Qu.:1.0000   3rd Qu.:0.0000
## Max.   :1.0000   Max.   :1.0000   Max.   :1.0000   Max.   :1.0000
##
##     ordure           toilet           eva_toi          eva_eau
## Min.   :0.0000   Min.   :0.0000   Min.   :0.000   Min.   :0.000
## 1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.000   1st Qu.:0.000
## Median :1.0000   Median :1.0000   Median :1.000   Median :0.000
## Mean   :0.5433   Mean   :0.5749   Mean   :0.514   Mean   :0.265
## 3rd Qu.:1.0000   3rd Qu.:1.0000   3rd Qu.:1.000   3rd Qu.:1.000
## Max.   :1.0000   Max.   :1.0000   Max.   :1.000   Max.   :1.000
##
##       tv              fer             frigo           cuisin
## Min.   :0.0000   Min.   :0.0000   Min.   :0.0000   Min.   :0.00000
## 1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.00000
## Median :1.0000   Median :0.0000   Median :0.0000   Median :0.00000
## Mean   :0.5617   Mean   :0.0375   Mean   :0.3239   Mean   :0.03708
## 3rd Qu.:1.0000   3rd Qu.:0.0000   3rd Qu.:1.0000   3rd Qu.:0.00000
## Max.   :1.0000   Max.   :1.0000   Max.   :1.0000   Max.   :1.00000
##
##     ordin            decod             car             superf
## Min.   :0.0000   Min.   :0.0000   Min.   :0.00000   Min.   : 0.000
## 1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.00000   1st Qu.: 1.042
## Median :0.0000   Median :0.0000   Median :0.00000   Median : 2.368
## Mean   :0.0625   Mean   :0.1548   Mean   :0.03919   Mean   : 3.291
## 3rd Qu.:0.0000   3rd Qu.:0.0000   3rd Qu.:0.00000   3rd Qu.: 4.318
## Max.   :1.0000   Max.   :1.0000   Max.   :1.00000   Max.   :83.619
##                                                     NA's   :4470
##     grosrum          petitrum          porc             lapin
## Min.   : 0.00    Min.   : 0.000   Min.   : 0.0000   Min.   : 0.00000
## 1st Qu.: 0.00    1st Qu.: 0.000   1st Qu.: 0.0000   1st Qu.: 0.00000
## Median : 0.00    Median : 0.000   Median : 0.0000   Median : 0.00000
## Mean   : 1.99    Mean   : 5.199   Mean   : 0.1056   Mean   : 0.01475
## 3rd Qu.: 0.00    3rd Qu.: 5.000   3rd Qu.: 0.0000   3rd Qu.: 0.00000
```

```
##  Max.   :235.00   Max.   :550.000   Max.   :50.0000   Max.    :18.00000
##
##      volail          sh_id_demo       sh_co_natu        sh_co_eco
##  Min.   :   0.00   Min.   :0.0000   Min.   :0.0000   Min.    :0.0000
##  1st Qu.:   0.00   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.0000
##  Median :   0.00   Median :0.0000   Median :0.0000   Median :0.0000
##  Mean   :   4.46   Mean   :0.2374   Mean   :0.2031   Mean    :0.4021
##  3rd Qu.:   0.00   3rd Qu.:0.0000   3rd Qu.:0.0000   3rd Qu.:1.0000
##  Max.   :1050.00   Max.   :1.0000   Max.   :1.0000   Max.    :1.0000
##
##     sh_id_eco         sh_co_vio         sh_co_oth
##  Min.   :0.0000   Min.   :0.00000   Min.    :0.00000
##  1st Qu.:0.0000   1st Qu.:0.00000   1st Qu.:0.00000
##  Median :0.0000   Median :0.00000   Median :0.00000
##  Mean   :0.1354   Mean   :0.01489   Mean    :0.01081
##  3rd Qu.:0.0000   3rd Qu.:0.00000   3rd Qu.:0.00000
##  Max.   :1.0000   Max.   :1.00000   Max.    :1.00000
##
```

Avoir des informations sur les chefs de ménage
Répartition selon le sexe
```
base::table(chefs_menage$sexe)
```

```
##
##    1    2
## 5095 2025
```

Répartition selon le niveau d'instruction
```
table(chefs_menage$educ_hi)
```

```
##
##    1    2    3    4    5    6    7    8    9
## 4894    1 1053  522   10  268   27   61  284
```

Répartition selon l'ethnie
```
table(chefs_menage$ethnie)
```

```
##
##    1    2    3    4    5    6    7    8    9   10   12   13
## 2269  872 2383  109  409  445   49  128   73  118  106   77
```

Les ménages ayant des chefs de ménage de sexe masculin sont doublement supérieurs à ceux ayant comme chefs de ménage des femmes. De plus, dans cette base, les ménages dirigés par des chefs de ménage ayant aucun niveau d'instruction et ceux ayant un niveau d'instruction primaire incomplet représentent plus de 80%.

Information sur le ménage
Accès à l'électricité selon le sexe du chef de ménage
```
Elec_selon_sexe <- chefs_menage %>%
  dplyr::group_by(sexe, elec_ac) %>%
  dplyr::summarise(effectif = n(), .groups = "drop") %>%
  dplyr::mutate(pourcentage = effectif / sum(effectif) * 100)
Elec_selon_sexe
```

```
## # A tibble: 4 x 4
##     sexe elec_ac effectif pourcentage
##    <int>   <int>    <int>       <dbl>
## 1     1       0     2043        28.7
## 2     1       1     3052        42.9
## 3     2       0      455         6.39
## 4     2       1     1570        22.1
```

```r
#Possession d'objets des ménages
chefs_menage %>%
  summarise(
    tv = mean(tv, na.rm = TRUE),
    frigo = mean(frigo, na.rm = TRUE),
    voiture = mean(car, na.rm = TRUE)
  )
```

```
##          tv     frigo    voiture
## 1 0.5616573 0.3238764 0.03918539
```

Qu'importe le sexe, il y a plus de ménages ayant accès à l'electricité que de ménages n'ayant pas accès.