Statistiques descriptives (TP4)

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Installation et chargement des packages

Cette section assure la disponibilité des bibliothèques nécessaires.

```
Packages <- c("readr", "haven", "utils", "dplyr","labelled", "gtsummary")

for (x in Packages) {
  if (!requireNamespace(x, quietly = TRUE)) {
    install.packages(x)
  }
  library(x, character.only = TRUE)
}
```

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

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

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

#Travail avec la base ménage

Importation des données

Chargement de la base principale

```
## Importation de la Base ménage

Base_men <- readr::read_csv("../Données/ehcvm_menage_bfa2021.csv")
```

```
## Rows: 7176 Columns: 39
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (28): country, logem, mur, toit, sol, eauboi_ss, eauboi_sp, elec_ac, ele...
## dbl (11): hhid, year, grappe, menage, vague, superf, grosrum, petitrum, porc...
##
## i Use 'spec()' to retrieve the full column specification for this data.
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
```

```
Base_men
```

```
## # A tibble: 7,176 x 39
##    country   hhid  year grappe menage vague logem    mur   toit  sol   eauboi_ss
##    <chr>    <dbl> <dbl>  <dbl>  <dbl> <dbl> <chr>    <chr> <chr> <chr> <chr>
##  1 bfa     586005  2021    586      5     2 Proprie~ Oui   Oui   Oui   Non
##  2 bfa     586028  2021    586     28     2 Proprie~ Oui   Oui   Oui   Oui
##  3 bfa     586043  2021    586     43     2 Proprie~ Oui   Oui   Oui   Non
##  4 bfa     586044  2021    586     44     2 Locatai~ Oui   Oui   Oui   Non
##  5 bfa     586052  2021    586     52     2 Locatai~ Oui   Oui   Oui   Non
##  6 bfa     586082  2021    586     82     2 Proprie~ Oui   Oui   Oui   Non
##  7 bfa     586083  2021    586     83     2 Proprie~ Oui   Oui   Oui   Non
##  8 bfa     586099  2021    586     99     2 Locatai~ Oui   Oui   Oui   Oui
##  9 bfa     586109  2021    586    109     2 Proprie~ Non   Non   Non   Non
## 10 bfa     586111  2021    586    111     2 Locatai~ Oui   Oui   Oui   Non
## # i 7,166 more rows
## # i 28 more variables: eauboi_sp <chr>, elec_ac <chr>, elec_ur <chr>,
## #   elec_ua <chr>, ordure <chr>, toilet <chr>, eva_toi <chr>, eva_eau <chr>,
## #   tv <chr>, fer <chr>, frigo <chr>, cuisin <chr>, ordin <chr>, decod <chr>,
## #   car <chr>, superf <dbl>, grosrum <dbl>, petitrum <dbl>, porc <dbl>,
## #   lapin <dbl>, volail <dbl>, sh_id_demo <chr>, sh_co_natu <chr>,
## #   sh_co_eco <chr>, sh_id_eco <chr>, sh_co_vio <chr>, sh_co_oth <chr>, ...
```

Aperçu de la structure des données

```
#Structure base
utils::str(Base_men)
```

```
## spc_tbl_ [7,176 x 39] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ country   : chr [1:7176] "bfa" "bfa" "bfa" "bfa" ...
##  $ hhid      : num [1:7176] 586005 586028 586043 586044 586052 ...
##  $ year      : num [1:7176] 2021 2021 2021 2021 2021 ...
##  $ grappe    : num [1:7176] 586 586 586 586 586 586 586 586 586 586 ...
##  $ menage    : num [1:7176] 5 28 43 44 52 82 83 99 109 111 ...
##  $ vague     : num [1:7176] 2 2 2 2 2 2 2 2 2 2 ...
##  $ logem     : chr [1:7176] "Proprietaire titre" "Proprietaire titre" "Proprietaire sans titre" "Loca
##  $ mur       : chr [1:7176] "Oui" "Oui" "Oui" "Oui" ...
##  $ toit      : chr [1:7176] "Oui" "Oui" "Oui" "Oui" ...
##  $ sol       : chr [1:7176] "Oui" "Oui" "Oui" "Oui" ...
##  $ eauboi_ss : chr [1:7176] "Non" "Oui" "Non" "Non" ...
##  $ eauboi_sp : chr [1:7176] "Non" "Oui" "Non" "Non" ...
##  $ elec_ac   : chr [1:7176] "Oui" "Oui" "Non" "Non" ...
##  $ elec_ur   : chr [1:7176] "Oui" "Oui" "Non" "Non" ...
##  $ elec_ua   : chr [1:7176] "Non" "Non" "Oui" "Oui" ...
##  $ ordure    : chr [1:7176] "Non" "Non" "Non" "Non" ...
##  $ toilet    : chr [1:7176] "Oui" "Oui" "Non" "Non" ...
##  $ eva_toi   : chr [1:7176] "Oui" "Oui" "Non" "Non" ...
##  $ eva_eau   : chr [1:7176] "Oui" "Oui" "Non" "Non" ...
##  $ tv        : chr [1:7176] "Oui" "Oui" "Non" "Non" ...
##  $ fer       : chr [1:7176] "Non" "Non" "Non" "Non" ...
##  $ frigo     : chr [1:7176] "Non" "Oui" "Non" "Non" ...
##  $ cuisin    : chr [1:7176] "Non" "Non" "Non" "Non" ...
##  $ ordin     : chr [1:7176] "Non" "Non" "Non" "Non" ...
```

```
##  $ decod     : chr [1:7176] "Non" "Oui" "Non" "Non" ...
##  $ car       : chr [1:7176] "Non" "Oui" "Non" "Non" ...
##  $ superf    : num [1:7176] 1.25 NA NA 0.932 NA ...
##  $ grosrum   : num [1:7176] 0 20 0 1 0 1 0 0 0 1 ...
##  $ petitrum  : num [1:7176] 0 6 4 4 0 0 7 0 0 0 ...
##  $ porc      : num [1:7176] 0 0 0 0 0 0 0 0 0 0 ...
##  $ lapin     : num [1:7176] 0 0 0 0 0 0 0 0 0 0 ...
##  $ volail    : num [1:7176] 0 0 15 11 0 0 20 0 0 5 ...
##  $ sh_id_demo: chr [1:7176] "Non" "Non" "Non" "Non" ...
##  $ sh_co_natu: chr [1:7176] "Non" "Non" "Oui" "Oui" ...
##  $ sh_co_eco : chr [1:7176] "Non" "Non" "Oui" "Oui" ...
##  $ sh_id_eco : chr [1:7176] "Non" "Oui" "Non" "Non" ...
##  $ sh_co_vio : chr [1:7176] "Oui" "Oui" "Non" "Non" ...
##  $ sh_co_oth : chr [1:7176] "Non" "Non" "Non" "Non" ...
##  $ enquete   : chr [1:7176] "grappes de l'enquête transversale" "grappes de l'enquête transversale" "
##  - attr(*, "spec")=
##   .. cols(
##   ..   country = col_character(),
##   ..   hhid = col_double(),
##   ..   year = col_double(),
##   ..   grappe = col_double(),
##   ..   menage = col_double(),
##   ..   vague = col_double(),
##   ..   logem = col_character(),
##   ..   mur = col_character(),
##   ..   toit = col_character(),
##   ..   sol = col_character(),
##   ..   eauboi_ss = col_character(),
##   ..   eauboi_sp = col_character(),
##   ..   elec_ac = col_character(),
##   ..   elec_ur = col_character(),
##   ..   elec_ua = col_character(),
##   ..   ordure = col_character(),
##   ..   toilet = col_character(),
##   ..   eva_toi = col_character(),
##   ..   eva_eau = col_character(),
##   ..   tv = col_character(),
##   ..   fer = col_character(),
##   ..   frigo = col_character(),
##   ..   cuisin = col_character(),
##   ..   ordin = col_character(),
##   ..   decod = col_character(),
##   ..   car = col_character(),
##   ..   superf = col_double(),
##   ..   grosrum = col_double(),
##   ..   petitrum = col_double(),
##   ..   porc = col_double(),
##   ..   lapin = col_double(),
##   ..   volail = col_double(),
##   ..   sh_id_demo = col_character(),
##   ..   sh_co_natu = col_character(),
##   ..   sh_co_eco = col_character(),
##   ..   sh_id_eco = col_character(),
##   ..   sh_co_vio = col_character(),
```

Characteristic	N = 7,176[1]
logem	
Autre	812 (11%)
Locataire	962 (13%)
Proprietaire sans titre	3,733 (52%)
Proprietaire titre	1,669 (23%)
toit	
Non	613 (8.5%)
Oui	6,563 (91%)
sol	
Non	1,383 (19%)
Oui	5,793 (81%)

[1] n (%)

```
##   ..   sh_co_oth = col_character(),
##   ..   enquete = col_character()
##   .. )
##  - attr(*, "problems")=<externalptr>
```

Affichage des noms des variables

```
#Noms variables
colnames(Base_men)
```

```
##  [1] "country"    "hhid"       "year"       "grappe"     "menage"
##  [6] "vague"      "logem"      "mur"        "toit"       "sol"
## [11] "eauboi_ss"  "eauboi_sp"  "elec_ac"    "elec_ur"    "elec_ua"
## [16] "ordure"     "toilet"     "eva_toi"    "eva_eau"    "tv"
## [21] "fer"        "frigo"      "cuisin"     "ordin"      "decod"
## [26] "car"        "superf"     "grosrum"    "petitrum"   "porc"
## [31] "lapin"      "volail"     "sh_id_demo" "sh_co_natu" "sh_co_eco"
## [36] "sh_id_eco"  "sh_co_vio"  "sh_co_oth"  "enquete"
```

##Statistiques et sorties de tableaux

Sorties de tableau avec labélisation des variables

```
#Activation de la labélisation
Base_men %>% labelled::to_factor() %>% select("logem","toit","sol") %>% tbl_summary()
```

```
#Labélisation des variables
Base_men %>% labelled::to_factor() %>% select("logem","toit","sol") %>% tbl_summary(label= list(logem ~
```

Sorties de tableaux en changeant l'entete

Characteristic	**N = 7,176**[1]
Type de logement occupé	
Autre	812 (11%)
Locataire	962 (13%)
Proprietaire sans titre	3,733 (52%)
Proprietaire titre	1,669 (23%)
Type de toit	
Non	613 (8.5%)
Oui	6,563 (91%)
Type de sol	
Non	1,383 (19%)
Oui	5,793 (81%)

[1] n (%)

Description du logement	**N = 7,176**[1]
Type de logement occupé	
Autre	812 (11%)
Locataire	962 (13%)
Proprietaire sans titre	3,733 (52%)
Proprietaire titre	1,669 (23%)
Type de toit	
Non	613 (8.5%)
Oui	6,563 (91%)
Type de sol	
Non	1,383 (19%)
Oui	5,793 (81%)

[1] n (%)

```
#Modification de l'entete
Base_men %>% labelled::to_factor() %>% select("logem","toit","sol") %>% tbl_summary(label= list(logem ~
```

Statistiques

```
Base_men %>% labelled::to_factor() %>% select("logem","toit","sol","superf","grosrum","petitrum") %>% tb
                    grosrum ~ "{mean} ({sd})",
                    petitrum ~ "{mean} ({sd})")) %>% modify_header(label="Description du logement")  %>%
```

Gestion des valeurs manquantes

```
Base_men %>% labelled::to_factor() %>% select("logem","toit","sol","superf","grosrum","petitrum") %>% tb
                    grosrum ~ "{mean} ({sd})",
                    petitrum ~ "{mean} ({sd})"),missing = "always",
                    missing_text = "valeurs manquantes") %>% modify_header(label="Description du logemen
```

Description du logement	N	N = 7,176[1]
Type de logement occupé	7,176	
Autre		812 (11%)
Locataire		962 (13%)
Proprietaire sans titre		3,733 (52%)
Proprietaire titre		1,669 (23%)
Type de toit	7,176	
Non		613 (8.5%)
Oui		6,563 (91%)
Type de sol	7,176	
Non		1,383 (19%)
Oui		5,793 (81%)
superf	4,359	3.46 (3.84)
Unknown		2,817
grosrum	7,176	1.74 (6.81)
petitrum	7,176	6 (10)

[1] n (%); Mean (SD)

Description du logement	N	N = 7,176[1]
Type de logement occupé	7,176	
Autre		812 (11%)
Locataire		962 (13%)
Proprietaire sans titre		3,733 (52%)
Proprietaire titre		1,669 (23%)
valeurs manquantes		0
Type de toit	7,176	
Non		613 (8.5%)
Oui		6,563 (91%)
valeurs manquantes		0
Type de sol	7,176	
Non		1,383 (19%)
Oui		5,793 (81%)
valeurs manquantes		0
superf	4,359	3.46 (3.84)
valeurs manquantes		2,817
grosrum	7,176	1.74 (6.81)
valeurs manquantes		0
petitrum	7,176	6 (10)
valeurs manquantes		0

[1] n (%); Mean (SD)

#Travail avec la base welfare

Chargement de la base

```
Base_wel <- readr::read_csv("../Données/ehcvm_welfare_2b_bfa2021.csv")
```

```
## Rows: 7176 Columns: 45
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (19): country, zae, region, milieu, hgender, hmstat, hreligion, hnation,...
## dbl (26): year, hhid, grappe, menage, vague, hhweight, hhsize, eqadu1, eqadu...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
Base_wel
```

```
## # A tibble: 7,176 x 45
##    country  year   hhid grappe menage vague zae    region milieu hhweight hhsize
##    <chr>   <dbl>  <dbl>  <dbl>  <dbl> <dbl> <chr>  <chr>  <chr>     <dbl>  <dbl>
##  1 bfa      2021 586005    586      5     2 Grand~ Boucl~ Rural       439      8
##  2 bfa      2021 586028    586     28     2 Grand~ Boucl~ Rural       439     33
##  3 bfa      2021 586043    586     43     2 Grand~ Boucl~ Rural       439      4
##  4 bfa      2021 586044    586     44     2 Grand~ Boucl~ Rural       439     12
##  5 bfa      2021 586052    586     52     2 Grand~ Boucl~ Rural       439     12
##  6 bfa      2021 586082    586     82     2 Grand~ Boucl~ Rural       439      6
##  7 bfa      2021 586083    586     83     2 Grand~ Boucl~ Rural       439      9
##  8 bfa      2021 586099    586     99     2 Grand~ Boucl~ Rural       439      9
##  9 bfa      2021 586109    586    109     2 Grand~ Boucl~ Rural       439      9
## 10 bfa      2021 586111    586    111     2 Grand~ Boucl~ Rural       439     15
## # i 7,166 more rows
## # i 34 more variables: eqadu1 <dbl>, eqadu2 <dbl>, hgender <chr>, hage <dbl>,
## #   hmstat <chr>, hreligion <chr>, hnation <chr>, hethnie <chr>, halfa <chr>,
## #   halfa2 <chr>, heduc <chr>, hdiploma <chr>, hhandig <chr>, hactiv7j <chr>,
## #   hactiv12m <chr>, hbranch <chr>, hsectins <chr>, hcsp <chr>, dali <dbl>,
## #   dnal <dbl>, dtot <dbl>, dtet <dbl>, pcexp <dbl>, zref <dbl>, def_spa <dbl>,
## #   def_temp <dbl>, zaemil <dbl>, dif <dbl>, p0 <dbl>, p1 <dbl>, p2 <dbl>, ...
```

Aperçu de la base

```
utils::str(Base_wel)
```

```
## spc_tbl_ [7,176 x 45] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ country  : chr [1:7176] "bfa" "bfa" "bfa" "bfa" ...
##  $ year     : num [1:7176] 2021 2021 2021 2021 2021 ...
##  $ hhid     : num [1:7176] 586005 586028 586043 586044 586052 ...
##  $ grappe   : num [1:7176] 586 586 586 586 586 586 586 586 586 586 ...
##  $ menage   : num [1:7176] 5 28 43 44 52 82 83 99 109 111 ...
##  $ vague    : num [1:7176] 2 2 2 2 2 2 2 2 2 2 ...
##  $ zae      : chr [1:7176] "Grand-ouest" "Grand-ouest" "Grand-ouest" "Grand-ouest" ...
##  $ region   : chr [1:7176] "Boucle du Mouhoum" "Boucle du Mouhoum" "Boucle du Mouhoum" "Boucle du Mou
##  $ milieu   : chr [1:7176] "Rural" "Rural" "Rural" "Rural" ...
```

```
##  $ hhweight : num [1:7176] 439 439 439 439 439 439 439 439 439 439 ...
##  $ hhsize   : num [1:7176] 8 33 4 12 12 6 9 9 9 15 ...
##  $ eqadu1   : num [1:7176] 6.72 23.76 2.83 8.52 9.21 ...
##  $ eqadu2   : num [1:7176] 4.18 14.02 2.44 5.98 6.28 ...
##  $ hgender  : chr [1:7176] "Masculin" "Masculin" "Masculin" "Masculin" ...
##  $ hage     : num [1:7176] 45 45 31 54 40 57 46 37 66 41 ...
##  $ hmstat   : chr [1:7176] "Marié(e) monogame" "Marié(e) polygame" "Marié(e) monogame" "Marié(e) mono
##  $ hreligion: chr [1:7176] "Musulman" "Musulman" "Chrétien" "Musulman" ...
##  $ hnation  : chr [1:7176] "Burkina Faso" "Burkina Faso" "Burkina Faso" "Burkina Faso" ...
##  $ hethnie  : chr [1:7176] "Mossi" "Mossi" "Bobo" "Autres ethnies" ...
##  $ halfa    : chr [1:7176] "Non" "Non" "Non" "Oui" ...
##  $ halfa2   : chr [1:7176] "Non" "Non" "Non" "Oui" ...
##  $ heduc    : chr [1:7176] "Aucun" "Aucun" "Aucun" "Aucun" ...
##  $ hdiploma : chr [1:7176] "Aucun" "Aucun" "Aucun" "Aucun" ...
##  $ hhandig  : chr [1:7176] "Non" "Non" "Non" "Non" ...
##  $ hactiv7j : chr [1:7176] "Occupe" "Occupe" "Occupe" "Chomeur" ...
##  $ hactiv12m: chr [1:7176] "Occupe" "Occupe" "Occupe" "Occupe" ...
##  $ hbranch  : chr [1:7176] "Services perso." "Services perso." "Commerce" "Agriculture" ...
##  $ hsectins : chr [1:7176] "Entreprise Privée" "Entreprise Privée" "Entreprise Privée" "Entreprise Pr
##  $ hcsp     : chr [1:7176] "Travailleur pour compte propre" "Patron" "Travailleur pour compte propre
##  $ dali     : num [1:7176] 1224618 5900909 524436 564769 502364 ...
##  $ dnal     : num [1:7176] 1275733 5590681 296808 435736 461143 ...
##  $ dtot     : num [1:7176] 2500352 11491589 821244 1000505 963507 ...
##  $ dtet     : num [1:7176] 312544 348230 205311 83375 80292 ...
##  $ pcexp    : num [1:7176] 330982 368773 217423 88294 85029 ...
##  $ zref     : num [1:7176] 247806 247806 247806 247806 247806 ...
##  $ def_spa  : num [1:7176] 0.944 0.944 0.944 0.944 0.944 ...
##  $ def_temp : num [1:7176] 1.06 1.06 1.06 1.06 1.06 ...
##  $ zaemil   : num [1:7176] 2 2 2 2 2 2 2 2 2 2 ...
##  $ dif      : num [1:7176] -83176 -120967 30383 159512 162777 ...
##  $ p0       : num [1:7176] 0 0 100 100 100 100 100 0 100 100 ...
##  $ p1       : num [1:7176] 0 0 12.3 64.4 65.7 ...
##  $ p2       : num [1:7176] 0 0 1.5 41.4 43.1 ...
##  $ pauv     : num [1:7176] 0 0 1 1 1 1 1 0 1 1 ...
##  $ quintiles: num [1:7176] 4 4 2 1 1 2 1 5 1 1 ...
##  $ deciles  : num [1:7176] 7 7 4 1 1 3 1 10 1 1 ...
##  - attr(*, "spec")=
##   .. cols(
##   ..   country = col_character(),
##   ..   year = col_double(),
##   ..   hhid = col_double(),
##   ..   grappe = col_double(),
##   ..   menage = col_double(),
##   ..   vague = col_double(),
##   ..   zae = col_character(),
##   ..   region = col_character(),
##   ..   milieu = col_character(),
##   ..   hhweight = col_double(),
##   ..   hhsize = col_double(),
##   ..   eqadu1 = col_double(),
##   ..   eqadu2 = col_double(),
##   ..   hgender = col_character(),
##   ..   hage = col_double(),
##   ..   hmstat = col_character(),
```

```
##   ..   hreligion = col_character(),
##   ..   hnation = col_character(),
##   ..   hethnie = col_character(),
##   ..   halfa = col_character(),
##   ..   halfa2 = col_character(),
##   ..   heduc = col_character(),
##   ..   hdiploma = col_character(),
##   ..   hhandig = col_character(),
##   ..   hactiv7j = col_character(),
##   ..   hactiv12m = col_character(),
##   ..   hbranch = col_character(),
##   ..   hsectins = col_character(),
##   ..   hcsp = col_character(),
##   ..   dali = col_double(),
##   ..   dnal = col_double(),
##   ..   dtot = col_double(),
##   ..   dtet = col_double(),
##   ..   pcexp = col_double(),
##   ..   zref = col_double(),
##   ..   def_spa = col_double(),
##   ..   def_temp = col_double(),
##   ..   zaemil = col_double(),
##   ..   dif = col_double(),
##   ..   p0 = col_double(),
##   ..   p1 = col_double(),
##   ..   p2 = col_double(),
##   ..   pauv = col_double(),
##   ..   quintiles = col_double(),
##   ..   deciles = col_double()
##   .. )
##  - attr(*, "problems")=<externalptr>
```

Affichage des noms des variables

```
colnames(Base_wel)
```

```
##  [1] "country"   "year"      "hhid"      "grappe"    "menage"    "vague"
##  [7] "zae"       "region"    "milieu"    "hhweight"  "hhsize"    "eqadu1"
## [13] "eqadu2"    "hgender"   "hage"      "hmstat"    "hreligion" "hnation"
## [19] "hethnie"   "halfa"     "halfa2"    "heduc"     "hdiploma"  "hhandig"
## [25] "hactiv7j"  "hactiv12m" "hbranch"   "hsectins"  "hcsp"      "dali"
## [31] "dnal"      "dtot"      "dtet"      "pcexp"     "zref"      "def_spa"
## [37] "def_temp"  "zaemil"    "dif"       "p0"        "p1"        "p2"
## [43] "pauv"      "quintiles" "deciles"
```

Sorties de tableaux

```
Base_wel %>% labelled::to_factor() %>% select("hgender","hage","hmstat","heduc","hdiploma") %>% tbl_summ
                  digits = list(hage ~ 2),
                  #digits = everything()~c(0,0,0)
                  missing = "always",
                  missing_text = "valeurs manquantes") %>% modify_header(label="Caractéristiques du Ch
```

Caractéristiques du Chef de ménage	**N**	**N = 7,176**[1]
Sexe du Chef de ménage	7,176	
Féminin		1,075 (15%)
Masculin		6,101 (85%)
valeurs manquantes		0
Age du Chef de ménage	7,176	45.68 (14.67)
valeurs manquantes		0
Situation matrimoniale	7,176	
Célibataire		349 (4.9%)
Divorcé(e)		50 (0.7%)
Marié(e) monogame		4,352 (61%)
Marié(e) polygame		1,572 (22%)
Séparé(e)		86 (1.2%)
Union libre		199 (2.8%)
Veuf(ve)		568 (7.9%)
valeurs manquantes		0
Niveau d'education	7,176	
Aucun		4,706 (66%)
Postprimaire technique		8 (0.1%)
Postprimaire général		622 (8.7%)
Postsecondaire		44 (0.6%)
Primaire		1,051 (15%)
Secondaire général		395 (5.5%)
Secondaire technique		39 (0.5%)
Superieur		311 (4.3%)
valeurs manquantes		0
diplome le plus élévé	7,176	
Aucun		5,551 (77%)
BAC		229 (3.2%)
BEPC		394 (5.5%)
BT		5 (<0.1%)
CAP		20 (0.3%)
CEPE		726 (10%)
DEUG, DUT, BTS		58 (0.8%)
Doctorat/Phd		4 (<0.1%)
Licence		110 (1.5%)
Maitrise		43 (0.6%)
Master/DEA/DESS		36 (0.5%)
valeurs manquantes		0

[1] n (%); Mean (SD)