Tabulation of Covariates and Outcomes for the Senegal census

Habibe Ibrahim

10 février 2024

# Table of content

# Clear the current workspace by removing all objects.  
# This is useful to start with a clean slate and avoid potential conflicts or unexpected behavior.  
rm(list=ls())

## Importing library

## Importing library  
### List of required packages  
required\_packages <- c("tidyverse","janitor" ,"readr","dplyr","haven","sf",  
 "flextable","sp", "factoextra", "FactoMineR","gtsummary", "sjPlot")  
  
# Check if packages are installed  
missing\_packages <- setdiff(required\_packages, installed.packages()[,"Package"])  
  
### Install missing packages  
if (length(missing\_packages) > 0) {  
 install.packages(missing\_packages)  
}  
  
### Load all packages  
lapply(required\_packages, library, character.only = TRUE)

# We set the theme to compact to ensure table fit the landscape page  
# This theme will apply to all the other tables in this Rmd  
set\_gtsummary\_theme(theme\_gtsummary\_compact())

## Importing the datasets an checking for duplicated row

### Importing the shapefile data

# Read shapefile data for 2002 and 2013  
sp\_rgph\_2002 <- sf::read\_sf(paste0(here::here(),"/output/output\_data/EAs\_2002\_new.shp"))  
# Mutating the 'sp\_rgph\_2002' dataset to create a new 'id\_dr' column based on conditions  
  
sp\_rgph\_2013 <- sf::read\_sf(paste0(here::here(),"/output/output\_data/EAs\_2013.shp"))  
  
# Display the first 10 rows of the 2002 and 2013 shapefiles  
head(sp\_rgph\_2002, 10L)  
head(sp\_rgph\_2013, 10L)

### Importing the census datasets

**For the 2002 census data**

# Read and check for duplicated rows in the "menage\_2002" dataset  
menage\_2002 <- haven::read\_sav(paste0(here::here(),"/output/output\_data/menage\_2002.sav"))  
menage\_2002 %>% janitor::get\_dupes()  
menage\_2002 %>% janitor::get\_dupes(ID\_MENAGE)

**For the 2013 census dataset**

# Read and check for duplicated rows in the "menage\_2013" dataset  
menage\_2013 <- haven::read\_sav(paste0(here::here(),"/output/output\_data/menage\_2013.sav"))  
menage\_2013 %>% janitor::get\_dupes()

## # A tibble: 0 × 187  
## # ℹ 187 variables: id\_dr <chr>, ID\_MENAGE <chr>, ID\_CONCESSION <chr>,  
## # A01 <dbl+lbl>, A02 <dbl>, A03 <dbl>, A04A <dbl>, IDDR <chr>, A04B <dbl>,  
## # A05 <chr>, A06 <chr>, Nbre\_indiv <dbl>, A10 <dbl+lbl>, A11 <dbl+lbl>,  
## # E01 <dbl+lbl>, E02 <dbl>, E03 <dbl+lbl>, E04 <dbl+lbl>, E05 <dbl+lbl>,  
## # E06 <dbl+lbl>, E07 <dbl+lbl>, E08 <dbl+lbl>, E09 <dbl+lbl>, E10 <dbl+lbl>,  
## # E11 <dbl+lbl>, E12 <dbl+lbl>, E13\_1 <dbl+lbl>, E13\_2 <dbl+lbl>,  
## # E13\_3 <dbl+lbl>, E13\_4 <dbl+lbl>, E13\_5 <dbl+lbl>, E13\_6 <dbl+lbl>, …

menage\_2013 %>% janitor::get\_dupes(ID\_MENAGE)

## # A tibble: 0 × 187  
## # ℹ 187 variables: ID\_MENAGE <chr>, dupe\_count <int>, id\_dr <chr>,  
## # ID\_CONCESSION <chr>, A01 <dbl+lbl>, A02 <dbl>, A03 <dbl>, A04A <dbl>,  
## # IDDR <chr>, A04B <dbl>, A05 <chr>, A06 <chr>, Nbre\_indiv <dbl>,  
## # A10 <dbl+lbl>, A11 <dbl+lbl>, E01 <dbl+lbl>, E02 <dbl>, E03 <dbl+lbl>,  
## # E04 <dbl+lbl>, E05 <dbl+lbl>, E06 <dbl+lbl>, E07 <dbl+lbl>, E08 <dbl+lbl>,  
## # E09 <dbl+lbl>, E10 <dbl+lbl>, E11 <dbl+lbl>, E12 <dbl+lbl>,  
## # E13\_1 <dbl+lbl>, E13\_2 <dbl+lbl>, E13\_3 <dbl+lbl>, E13\_4 <dbl+lbl>, …

# Study Variables

## Socio-demographic variables

### Sex/gender

gender\_var = c("homme","femme","hh\_size")  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,homme,femme,hh\_size) %>%   
   
 plyr::rbind.fill(  
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
 # Selecting relevant variables  
 select(RGPH, homme,femme,hh\_size)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
 type = c(gender\_var~"continuous"),  
 label = list(  
 homme ~ "Hommes",  
 femme ~ "Femmes",  
 hh\_size ~ "Taille du ménage"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Composition des ménages") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Composition des ménages | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Hommes | 78,388 | 3.91 (3.23) | 4.33 (3.58) | 3.57 (2.87) | 0.76 | 0.71, 0.80 | <0.001 |
| Femmes | 78,388 | 3.99 (3.41) | 4.37 (3.71) | 3.67 (3.10) | 0.70 | 0.65, 0.75 | <0.001 |
| Taille du ménage | 78,388 | 7.90 (6.05) | 8.70 (6.68) | 7.24 (5.38) | 1.5 | 1.4, 1.5 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Age

#For babies under one year old, write “0” years. For people aged 98 and over, the instruction was to write 98 for age.  
  
age\_var = c("nbr\_babies","nbr\_under\_14","nbr\_young\_people","nbr\_adult", "nbr\_elder\_adult", "nbr\_senior")  
  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,nbr\_babies,nbr\_under\_14,nbr\_young\_people,nbr\_adult, nbr\_elder\_adult, nbr\_senior) %>%   
   
 plyr::rbind.fill(  
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,nbr\_babies,nbr\_under\_14,nbr\_young\_people,nbr\_adult, nbr\_elder\_adult, nbr\_senior)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
  
 type = c(age\_var~"continuous"),  
   
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Composition des ménages par age") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Composition des ménages par age | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Nombre d'enfant agée de moins d'un an | 78,388 | 0.17 (0.46) | 0.20 (0.52) | 0.15 (0.41) | 0.05 | 0.05, 0.06 | <0.001 |
| Nombre d'enfant agée de moins de 14 ans | 78,388 | 2.65 (2.77) | 3.06 (3.07) | 2.31 (2.44) | 0.75 | 0.71, 0.79 | <0.001 |
| Nombre d'individus agée entre 15 et 29 ans | 78,388 | 2.63 (2.57) | 3.04 (2.86) | 2.29 (2.25) | 0.75 | 0.71, 0.78 | <0.001 |
| Nombre d'individus agées entre 30 et 44 ans | 78,388 | 1.51 (1.46) | 1.53 (1.49) | 1.49 (1.43) | 0.05 | 0.02, 0.07 | <0.001 |
| Nombre d'individus agées entre 45 et 59 ans | 78,388 | 0.74 (0.86) | 0.73 (0.86) | 0.74 (0.86) | -0.02 | -0.03, 0.00 | 0.009 |
| Nombre d'individus agée de plus de 60 ans | 78,388 | 0.38 (0.64) | 0.34 (0.60) | 0.41 (0.66) | -0.07 | -0.08, -0.06 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Marital Status

mat\_status\_var = c("Monogame","Polygame","Celibataire","Veuf","Divorce")  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,Monogame,Polygame,Celibataire,Veuf,Divorce) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,Monogame,Polygame,Celibataire,Veuf,Divorce)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
  
 type = c(mat\_status\_var~"continuous"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "situation matrimoniale") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| situation matrimoniale | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Nombre de monogame dans le ménage | 78,388 | 1.91 (1.81) | 2.19 (1.97) | 1.67 (1.64) | 0.52 | 0.49, 0.55 | <0.001 |
| Nombre de polygame dans le ménage | 78,388 | 0.70 (1.21) | 0.74 (1.26) | 0.67 (1.16) | 0.07 | 0.05, 0.08 | <0.001 |
| Nombre de celibataire dans le ménage | 78,388 | 3.02 (2.96) | 3.19 (3.18) | 2.88 (2.77) | 0.31 | 0.27, 0.35 | <0.001 |
| Nombre de veuf/veuve dans le ménage | 78,388 | 0.13 (0.37) | 0.09 (0.32) | 0.16 (0.41) | -0.07 | -0.08, -0.07 | <0.001 |
| Nombre de divorcé dans le ménage | 78,388 | 0.11 (0.36) | 0.07 (0.30) | 0.14 (0.40) | -0.07 | -0.07, -0.06 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Fertility

#Changer les labels  
fertility\_var = c("fertility")  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,fertility) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,fertility)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
  
 type = c(fertility\_var~"continuous"),  
 label = list(  
 fertility ~ "Label fertilité"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Fertilité") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Fertilité | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Label fertilité | 78,388 | 11.35 (11.34) | 12.02 (11.94) | 10.80 (10.79) | 1.2 | 1.1, 1.4 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Educational level

educ\_var = c("Aucun","Primaire","Moyen","Secondaire","Superieur")  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,Aucun,Primaire,Moyen,Secondaire,Superieur) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,Aucun,Primaire,Moyen,Secondaire,Superieur)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
 label = list(Aucun ~ "Aucun",  
 Primaire ~ "Primaire",  
 Moyen ~ "Moyen",  
 Secondaire ~ "Sécondaire",  
 Superieur ~ "Supérieur"),  
 type = c(educ\_var~"continuous"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Niveau d'instruction") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Niveau d'instruction | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Aucun | 78,388 | 1.58 (3.22) | 3.50 (4.02) | 0.00 (0.00) | 3.5 | 3.5, 3.5 | <0.001 |
| Primaire | 78,388 | 2.53 (2.70) | 2.81 (2.95) | 2.30 (2.44) | 0.51 | 0.47, 0.55 | <0.001 |
| Moyen | 78,388 | 1.03 (1.37) | 0.99 (1.38) | 1.07 (1.36) | -0.08 | -0.10, -0.06 | <0.001 |
| Sécondaire | 78,388 | 0.54 (0.93) | 0.48 (0.89) | 0.60 (0.96) | -0.11 | -0.13, -0.10 | <0.001 |
| Supérieur | 78,388 | 0.38 (0.83) | 0.29 (0.68) | 0.46 (0.92) | -0.17 | -0.18, -0.16 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Literacy level

#For the RGPH 2002 dataset  
literacy\_var = c("Literacy\_French","Literacy\_Arabic","Literacy\_Wolof","Literacy\_Pulaar","Literacy\_Sereer","Literacy\_Mandingo","Literacy\_Diola","Literacy\_Soninke")  
  
  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,Literacy\_French,Literacy\_Arabic,Literacy\_Wolof,Literacy\_Pulaar,Literacy\_Sereer,Literacy\_Mandingo,Literacy\_Diola,Literacy\_Soninke) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,Literacy\_French,Literacy\_Arabic,Literacy\_Wolof,Literacy\_Pulaar,Literacy\_Sereer,Literacy\_Mandingo,Literacy\_Diola,Literacy\_Soninke)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
   
 label = list(Literacy\_French ~ "Français",  
 Literacy\_Arabic ~ "Arabe",  
 Literacy\_Wolof ~ "Wolof",  
 Literacy\_Pulaar ~ "Pulaar",  
 Literacy\_Sereer ~ "Sereer",  
 Literacy\_Mandingo ~ "Mandingo",  
 Literacy\_Diola ~ "Diola",  
 Literacy\_Soninke ~ "Sononké"  
 ),  
   
 type = c(literacy\_var~"continuous"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Alphabétisation dans le ménage") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Alphabétisation dans le ménage | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Français | 78,388 | 3.87 (3.62) | 4.47 (4.04) | 3.38 (3.15) | 1.1 | 1.0, 1.1 | <0.001 |
| Arabe | 78,388 | 1.00 (2.21) | 1.56 (2.88) | 0.55 (1.28) | 1.0 | 0.97, 1.0 | <0.001 |
| Wolof | 78,388 | 0.13 (0.71) | 0.10 (0.60) | 0.15 (0.79) | -0.05 | -0.06, -0.04 | <0.001 |
| Pulaar | 78,388 | 0.03 (0.33) | 0.04 (0.36) | 0.03 (0.30) | 0.01 | 0.00, 0.01 | 0.021 |
| Sereer | 78,388 | 0.01 (0.14) | 0.01 (0.16) | 0.01 (0.12) | 0.00 | 0.00, 0.00 | 0.5 |
| Mandingo | 78,388 | 0.00 (0.12) | 0.00 (0.13) | 0.00 (0.10) | 0.00 | 0.00, 0.00 | 0.7 |
| Diola | 78,388 | 0.00 (0.10) | 0.00 (0.07) | 0.00 (0.12) | 0.00 | 0.00, 0.00 | <0.001 |
| Sononké | 78,388 | 0.00 (0.10) | 0.00 (0.08) | 0.00 (0.11) | 0.00 | 0.00, 0.00 | 0.039 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Migration variable

mig\_var = c("resident\_pres","resident\_abs","resident\_vis")  
  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,resident\_pres,resident\_abs,resident\_vis) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,resident\_pres,resident\_abs,resident\_vis)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
   
 label = list(resident\_pres ~ "Présent",  
 resident\_abs ~ "Absent",  
 resident\_vis ~ "Visiteur"  
 ),  
   
 type = c(mig\_var~"continuous"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Résidence dans le ménage") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Résidence dans le ménage | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Présent | 78,388 | 7.56 (5.89) | 8.41 (6.48) | 6.86 (5.26) | 1.5 | 1.5, 1.6 | <0.001 |
| Absent | 78,388 | 0.22 (0.78) | 0.18 (0.69) | 0.24 (0.85) | -0.06 | -0.07, -0.05 | <0.001 |
| Visiteur | 78,388 | 0.12 (0.52) | 0.10 (0.47) | 0.14 (0.55) | -0.03 | -0.04, -0.03 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Maternal death variable

deces\_mat\_var = c("deces\_mat\_oui","deces\_mat\_non","deces\_mat\_nsp")  
  
# Pas collecter and 2013  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,deces\_mat\_oui,deces\_mat\_non,deces\_mat\_nsp) %>%   
   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 # by = RGPH, # Group by "RGPH" column  
  
 type = c(deces\_mat\_var~"continuous"),  
   
 label = list(deces\_mat\_oui ~ "Oui",  
 deces\_mat\_non ~ "Non",  
 deces\_mat\_nsp ~ "NSP"  
 ),  
   
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%)",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Déces maternelle dans le ménage") %>%  
 #add\_overall() %>%  
 add\_n()

| Déces maternelle dans le ménage | **N** | **N = 35,396**1 |
| --- | --- | --- |
| RGPH | 35,396 |  |
| 2002 |  | 35,396.00 (100.00%) |
| Oui | 2,036 | 0.03 (0.18) |
| (Missing) |  | 33,360 |
| Non | 2,036 | 0.10 (0.32) |
| (Missing) |  | 33,360 |
| NSP | 2,036 | 0.02 (0.15) |
| (Missing) |  | 33,360 |
| 1n (%); Mean (SD) | | |

# Add difference statistics to the table  
 #add\_difference() %>%

## Socio-economic variables

### Employed variable

occup\_var=c("occup\_independant","occup\_employeur","occup\_salarie","occup\_apprenti","occup\_aideFamilial","occup\_autre")   
  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,occup\_independant,occup\_employeur,occup\_salarie,occup\_apprenti,occup\_aideFamilial,occup\_autre) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,occup\_independant,occup\_employeur,occup\_salarie,occup\_apprenti,occup\_aideFamilial,occup\_autre)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
   
 label = list(occup\_independant ~ "Indépendant",  
 occup\_employeur ~ "Employeur",  
 occup\_salarie ~ "Salarié",  
 occup\_apprenti ~ "Apprenti",  
 occup\_aideFamilial ~ "Aide familial",  
 occup\_autre ~ "Autre"  
 ),  
   
 type = c(occup\_var~"continuous"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Occupation des membres du ménage") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Occupation des membres du ménage | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Indépendant | 78,388 | 1.17 (1.50) | 1.25 (1.60) | 1.11 (1.41) | 0.13 | 0.11, 0.16 | <0.001 |
| Employeur | 78,388 | 0.08 (0.36) | 0.03 (0.22) | 0.11 (0.45) | -0.08 | -0.08, -0.08 | <0.001 |
| Salarié | 78,388 | 0.76 (1.10) | 0.80 (1.16) | 0.72 (1.05) | 0.08 | 0.06, 0.09 | <0.001 |
| Apprenti | 78,388 | 0.27 (0.73) | 0.36 (0.86) | 0.20 (0.58) | 0.16 | 0.15, 0.17 | <0.001 |
| Aide familial | 78,388 | 0.03 (0.23) | 0.04 (0.28) | 0.02 (0.18) | 0.02 | 0.02, 0.02 | <0.001 |
| Autre | 78,388 | 0.06 (0.34) | 0.06 (0.38) | 0.05 (0.31) | 0.01 | 0.01, 0.02 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Occupational status variable

sit\_occup\_var=c("sit\_occup\_occup","sit\_occup\_chomeur","sit\_occup\_foyer","sit\_occup\_etudiant","sit\_occup\_rentier","sit\_occup\_retraite","sit\_occup\_autre")   
  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,sit\_occup\_occup,sit\_occup\_chomeur,sit\_occup\_foyer,sit\_occup\_etudiant,sit\_occup\_rentier,sit\_occup\_retraite,sit\_occup\_autre) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,sit\_occup\_occup,sit\_occup\_chomeur,sit\_occup\_foyer,sit\_occup\_etudiant,sit\_occup\_rentier,sit\_occup\_retraite,sit\_occup\_autre)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
  
 type = c(sit\_occup\_var~"continuous"),  
   
 label = list(sit\_occup\_occup ~ "Occupé",  
 sit\_occup\_chomeur ~ "Chomeur",  
 sit\_occup\_foyer ~ "Foyer",  
 sit\_occup\_etudiant ~ "Étudiant",  
 sit\_occup\_rentier ~ "Rentier",  
 sit\_occup\_retraite ~ "Retraité",  
 sit\_occup\_autre ~ "Autre"  
 ),  
   
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Situation dans l'occupation principale des membres du ménage") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Situation dans l'occupation principale des membres du ménage | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Occupé | 78,388 | 2.37 (2.28) | 2.64 (2.57) | 2.15 (1.98) | 0.49 | 0.46, 0.52 | <0.001 |
| Chomeur | 78,388 | 0.43 (0.96) | 0.48 (1.05) | 0.39 (0.88) | 0.10 | 0.08, 0.11 | <0.001 |
| Foyer | 78,388 | 1.15 (1.48) | 1.51 (1.72) | 0.86 (1.17) | 0.66 | 0.63, 0.68 | <0.001 |
| Étudiant | 78,388 | 2.01 (2.27) | 1.91 (2.25) | 2.08 (2.28) | -0.17 | -0.21, -0.14 | <0.001 |
| Rentier | 78,388 | 0.01 (0.15) | 0.00 (0.00) | 0.01 (0.20) | -0.01 | -0.01, -0.01 | <0.001 |
| Retraité | 78,388 | 0.21 (0.47) | 0.23 (0.48) | 0.19 (0.45) | 0.04 | 0.04, 0.05 | <0.001 |
| Autre | 78,388 | 0.55 (1.27) | 0.66 (1.46) | 0.46 (1.09) | 0.20 | 0.19, 0.22 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Income variable

income\_var = c("I\_repas\_saute","I\_soins\_medicaux")  
  
# Il faut revoir les labels dans cette region  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,I\_repas\_saute,I\_soins\_medicaux) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,I\_repas\_saute,I\_soins\_medicaux)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
   
 label = list(  
 I\_repas\_saute ~ "Repas sauté",  
 I\_soins\_medicaux ~ "Soins médicaux"  
 ),  
   
 type = c(income\_var~"continuous"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%,{n}/{N})",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Sauté") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Sauté | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Repas sauté | 78,388 | 0.22 (0.41) | 0.26 (0.44) | 0.18 (0.39) | 0.07 | 0.07, 0.08 | <0.001 |
| Soins médicaux | 78,388 | 0.26 (0.44) | 0.29 (0.45) | 0.23 (0.42) | 0.06 | 0.05, 0.06 | <0.001 |
| 1Mean (SD) | | | | | | | |
| 2Welch Two Sample t-test | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

## Household variables

### Capital goods variable

#For the RGPH 2002 dataset  
#OK  
# 1. Radio, 2. Television, 3. Video/VCD/DVD, 4. Refrigerator/freezer, 5. Telephone, 6. Improved fireplace, 7. Air conditioner, 8. Sewing machine, 9. Water heater, 10. Stove  
  
#For the RGPH 2013 dataset

### Access to basic equipment

#For the RGPH 2002 dataset  
#OK  
# 1. Main mode of household waste disposal, 2. Main mode of waste water disposal, 3. Main mode of lighting, 4. Main fuel for cooking  
#For the RGPH 2013 dataset  
  
equipment\_var <- c("soins\_medicaux","repas\_saute","evacut\_eaux\_usees","terrain\_bat","appareil\_photo","moulin","ordinateur","photocopieuse","telephone\_tele","chaise\_bache","materiel\_musique","machine\_coudre","refriger\_congelat","mobylette\_bicycl","voiture\_cam","tracteur","animaux\_traite","caleche\_char","houe\_charrue","pirogue","caleche\_charette","bicyclette","mobylette","voiture","machine\_coudre","climatisateur","foyer\_ameli","rechaud\_cuis","telephone","refri\_conge","video","televiseur","radio","nature\_sol","nature\_toit","nature\_mur","combustible\_cuisine","eclairage","approv\_eau","type\_aisance","stat\_occupation","piece\_occup","type\_log")  
  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,soins\_medicaux,repas\_saute,evacut\_eaux\_usees,terrain\_bat,appareil\_photo,moulin,ordinateur,photocopieuse,telephone\_tele,chaise\_bache,materiel\_musique,machine\_coudre,refriger\_congelat,mobylette\_bicycl,voiture\_cam,tracteur,animaux\_traite,caleche\_char,houe\_charrue,pirogue,caleche\_charette,bicyclette,mobylette,voiture,machine\_coudre,climatisateur,foyer\_ameli,rechaud\_cuis,telephone,refri\_conge,video,televiseur,radio,nature\_sol,nature\_toit,nature\_mur,combustible\_cuisine,eclairage,approv\_eau,type\_aisance,stat\_occupation,piece\_occup,type\_log) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,soins\_medicaux,repas\_saute,evacut\_eaux\_usees,terrain\_bat,appareil\_photo,moulin,ordinateur,photocopieuse,telephone\_tele,chaise\_bache,materiel\_musique,machine\_coudre,refriger\_congelat,mobylette\_bicycl,voiture\_cam,tracteur,animaux\_traite,caleche\_char,houe\_charrue,pirogue,caleche\_charette,bicyclette,mobylette,voiture,machine\_coudre,climatisateur,foyer\_ameli,rechaud\_cuis,telephone,refri\_conge,video,televiseur,radio,nature\_sol,nature\_toit,nature\_mur,combustible\_cuisine,eclairage,approv\_eau,type\_aisance,stat\_occupation,piece\_occup,type\_log)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
   
 # label = list(  
 # I\_repas\_saute ~ "Repas sauté",  
 # I\_soins\_medicaux ~ "Soins médicaux"  
 # ),  
   
 type = c(equipment\_var~"categorical"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%)",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Access aux equipements") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Access aux equipements | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **p-value** |
| --- | --- | --- | --- | --- | --- |
| Soins médicaux | 75,438 |  |  |  |  |
| 1 |  | 32,233.00 (42.73%) | 22,270.00 (68.64%) | 9,963.00 (23.17%) |  |
| 2 |  | 34,697.00 (45.99%) | 10,176.00 (31.36%) | 24,521.00 (57.04%) |  |
| 3 |  | 8,508.00 (11.28%) | 0.00 (0.00%) | 8,508.00 (19.79%) |  |
| (Missing) |  | 2,950 | 2,950 | 0 |  |
| Repas sauté | 78,388 |  |  |  |  |
| 1 |  | 44,234.00 (56.43%) | 9,151.00 (25.85%) | 35,083.00 (81.60%) |  |
| 2 |  | 34,154.00 (43.57%) | 26,245.00 (74.15%) | 7,909.00 (18.40%) |  |
| Évacuation des eaux usées | 78,388 |  |  |  |  |
| 1 |  | 19,245.00 (24.55%) | 6,283.00 (17.75%) | 12,962.00 (30.15%) |  |
| 2 |  | 5,924.00 (7.56%) | 2,185.00 (6.17%) | 3,739.00 (8.70%) |  |
| 3 |  | 547.00 (0.70%) | 169.00 (0.48%) | 378.00 (0.88%) |  |
| 4 |  | 1,364.00 (1.74%) | 1,023.00 (2.89%) | 341.00 (0.79%) |  |
| 5 |  | 10,629.00 (13.56%) | 86.00 (0.24%) | 10,543.00 (24.52%) |  |
| 6 |  | 334.00 (0.43%) | 50.00 (0.14%) | 284.00 (0.66%) |  |
| 7 |  | 2,815.00 (3.59%) | 2,707.00 (7.65%) | 108.00 (0.25%) |  |
| 8 |  | 22,578.00 (28.80%) | 21,135.00 (59.71%) | 1,443.00 (3.36%) |  |
| 9 |  | 14,617.00 (18.65%) | 1,758.00 (4.97%) | 12,859.00 (29.91%) |  |
| 10 |  | 335.00 (0.43%) | 0.00 (0.00%) | 335.00 (0.78%) |  |
| Terrain, bâtiment | 78,388 |  |  |  |  |
| 1 |  | 77,292.00 (98.60%) | 35,098.00 (99.16%) | 42,194.00 (98.14%) |  |
| 2 |  | 1,096.00 (1.40%) | 298.00 (0.84%) | 798.00 (1.86%) |  |
| Appareil photo, camera | 78,388 |  |  |  |  |
| 1 |  | 78,109.00 (99.64%) | 35,304.00 (99.74%) | 42,805.00 (99.57%) |  |
| 2 |  | 279.00 (0.36%) | 92.00 (0.26%) | 187.00 (0.43%) |  |
| Moulin, décortiqueuse | 78,388 |  |  |  |  |
| 1 |  | 78,360.00 (99.96%) | 35,384.00 (99.97%) | 42,976.00 (99.96%) |  |
| 2 |  | 28.00 (0.04%) | 12.00 (0.03%) | 16.00 (0.04%) |  |
| Ordinateur | 78,388 |  |  |  |  |
| 1 |  | 77,830.00 (99.29%) | 35,299.00 (99.73%) | 42,531.00 (98.93%) |  |
| 2 |  | 558.00 (0.71%) | 97.00 (0.27%) | 461.00 (1.07%) |  |
| Photocopieuse | 78,388 |  |  |  |  |
| 1 |  | 78,310.00 (99.90%) | 35,364.00 (99.91%) | 42,946.00 (99.89%) |  |
| 2 |  | 78.00 (0.10%) | 32.00 (0.09%) | 46.00 (0.11%) |  |
| Téléphone, téléfax | 78,388 |  |  |  |  |
| 1 |  | 78,050.00 (99.57%) | 35,157.00 (99.32%) | 42,893.00 (99.77%) |  |
| 2 |  | 338.00 (0.43%) | 239.00 (0.68%) | 99.00 (0.23%) |  |
| Chaise, bâche | 78,388 |  |  |  |  |
| 1 |  | 78,156.00 (99.70%) | 35,314.00 (99.77%) | 42,842.00 (99.65%) |  |
| 2 |  | 232.00 (0.30%) | 82.00 (0.23%) | 150.00 (0.35%) |  |
| Matériel de musique | 78,388 |  |  |  |  |
| 1 |  | 78,130.00 (99.67%) | 35,283.00 (99.68%) | 42,847.00 (99.66%) |  |
| 2 |  | 258.00 (0.33%) | 113.00 (0.32%) | 145.00 (0.34%) |  |
| Machine à coudre | 78,388 |  |  |  |  |
| 1 |  | 77,055.00 (98.30%) | 35,046.00 (99.01%) | 42,009.00 (97.71%) |  |
| 2 |  | 1,333.00 (1.70%) | 350.00 (0.99%) | 983.00 (2.29%) |  |
| Réfrigerateur, congélateur | 78,388 |  |  |  |  |
| 1 |  | 74,346.00 (94.84%) | 34,120.00 (96.40%) | 40,226.00 (93.57%) |  |
| 2 |  | 4,042.00 (5.16%) | 1,276.00 (3.60%) | 2,766.00 (6.43%) |  |
| Mobylette, bicyclette | 78,388 |  |  |  |  |
| 1 |  | 78,252.00 (99.83%) | 35,377.00 (99.95%) | 42,875.00 (99.73%) |  |
| 2 |  | 136.00 (0.17%) | 19.00 (0.05%) | 117.00 (0.27%) |  |
| Voiture, camion | 78,388 |  |  |  |  |
| 1 |  | 76,846.00 (98.03%) | 34,778.00 (98.25%) | 42,068.00 (97.85%) |  |
| 2 |  | 1,542.00 (1.97%) | 618.00 (1.75%) | 924.00 (2.15%) |  |
| Tracteur | 78,388 |  |  |  |  |
| 1 |  | 78,366.00 (99.97%) | 35,387.00 (99.97%) | 42,979.00 (99.97%) |  |
| 2 |  | 22.00 (0.03%) | 9.00 (0.03%) | 13.00 (0.03%) |  |
| Animaux de traite | 78,388 |  |  |  |  |
| 1 |  | 77,985.00 (99.49%) | 35,154.00 (99.32%) | 42,831.00 (99.63%) |  |
| 2 |  | 403.00 (0.51%) | 242.00 (0.68%) | 161.00 (0.37%) |  |
| Calèche, charrette | 78,388 |  |  |  |  |
| 1 |  | 78,166.00 (99.72%) | 35,312.00 (99.76%) | 42,854.00 (99.68%) |  |
| 2 |  | 222.00 (0.28%) | 84.00 (0.24%) | 138.00 (0.32%) |  |
| Houe, charrue, sémoir | 78,388 |  |  |  |  |
| 1 |  | 78,275.00 (99.86%) | 35,344.00 (99.85%) | 42,931.00 (99.86%) |  |
| 2 |  | 113.00 (0.14%) | 52.00 (0.15%) | 61.00 (0.14%) |  |
| Aucun | 78,388 |  |  |  |  |
| 1 |  | 47,910.00 (61.12%) | 4,939.00 (13.95%) | 42,971.00 (99.95%) |  |
| 2 |  | 30,478.00 (38.88%) | 30,457.00 (86.05%) | 21.00 (0.05%) |  |
| Pirogue | 78,388 |  |  |  |  |
| 1 |  | 78,201.00 (99.76%) | 35,360.00 (99.90%) | 42,841.00 (99.65%) |  |
| 2 |  | 187.00 (0.24%) | 36.00 (0.10%) | 151.00 (0.35%) |  |
| Calèche/charrette | 78,388 |  |  |  |  |
| 1 |  | 77,885.00 (99.36%) | 35,330.00 (99.81%) | 42,555.00 (98.98%) |  |
| 2 |  | 503.00 (0.64%) | 66.00 (0.19%) | 437.00 (1.02%) |  |
| Mobylette | 78,388 |  |  |  |  |
| 1 |  | 77,699.00 (99.12%) | 34,824.00 (98.38%) | 42,875.00 (99.73%) |  |
| 2 |  | 689.00 (0.88%) | 572.00 (1.62%) | 117.00 (0.27%) |  |
| Voiture | 78,388 |  |  |  |  |
| 1 |  | 73,151.00 (93.32%) | 31,083.00 (87.82%) | 42,068.00 (97.85%) |  |
| 2 |  | 5,237.00 (6.68%) | 4,313.00 (12.18%) | 924.00 (2.15%) |  |
| Climatiseur | 78,388 |  |  |  |  |
| 1 |  | 75,996.00 (96.95%) | 34,523.00 (97.53%) | 41,473.00 (96.47%) |  |
| 2 |  | 2,392.00 (3.05%) | 873.00 (2.47%) | 1,519.00 (3.53%) |  |
| Foyer amélioré | 78,388 |  |  |  |  |
| 1 |  | 67,452.00 (86.05%) | 35,082.00 (99.11%) | 32,370.00 (75.29%) |  |
| 2 |  | 10,936.00 (13.95%) | 314.00 (0.89%) | 10,622.00 (24.71%) |  |
| Réchaud/Cuisinière | 78,388 |  |  |  |  |
| 1 |  | 72,094.00 (91.97%) | 32,113.00 (90.72%) | 39,981.00 (93.00%) |  |
| 2 |  | 6,294.00 (8.03%) | 3,283.00 (9.28%) | 3,011.00 (7.00%) |  |
| Téléphone | 78,388 |  |  |  |  |
| 1 |  | 30,357.00 (38.73%) | 25,899.00 (73.17%) | 4,458.00 (10.37%) |  |
| 2 |  | 48,031.00 (61.27%) | 9,497.00 (26.83%) | 38,534.00 (89.63%) |  |
| Réfrigérateur/Congélateur | 78,388 |  |  |  |  |
| 1 |  | 46,880.00 (59.81%) | 23,708.00 (66.98%) | 23,172.00 (53.90%) |  |
| 2 |  | 31,508.00 (40.19%) | 11,688.00 (33.02%) | 19,820.00 (46.10%) |  |
| Vidéo | 78,388 |  |  |  |  |
| 1 |  | 55,722.00 (71.08%) | 29,160.00 (82.38%) | 26,562.00 (61.78%) |  |
| 2 |  | 22,666.00 (28.92%) | 6,236.00 (17.62%) | 16,430.00 (38.22%) |  |
| Téléviseur | 78,388 |  |  |  |  |
| 1 |  | 19,317.00 (24.64%) | 14,701.00 (41.53%) | 4,616.00 (10.74%) |  |
| 2 |  | 59,071.00 (75.36%) | 20,695.00 (58.47%) | 38,376.00 (89.26%) |  |
| Radio | 78,388 |  |  |  |  |
| 1 |  | 17,163.00 (21.89%) | 5,859.00 (16.55%) | 11,304.00 (26.29%) |  |
| 2 |  | 61,225.00 (78.11%) | 29,537.00 (83.45%) | 31,688.00 (73.71%) |  |
| Nature du sol | 78,388 |  |  |  |  |
| 1 |  | 34,564.00 (44.09%) | 9,170.00 (25.91%) | 25,394.00 (59.07%) |  |
| 2 |  | 34,556.00 (44.08%) | 20,432.00 (57.72%) | 14,124.00 (32.85%) |  |
| 3 |  | 112.00 (0.14%) | 84.00 (0.24%) | 28.00 (0.07%) |  |
| 4 |  | 7,941.00 (10.13%) | 5,617.00 (15.87%) | 2,324.00 (5.41%) |  |
| 5 |  | 1,015.00 (1.29%) | 93.00 (0.26%) | 922.00 (2.14%) |  |
| 6 |  | 145.00 (0.18%) | 0.00 (0.00%) | 145.00 (0.34%) |  |
| 7 |  | 9.00 (0.01%) | 0.00 (0.00%) | 9.00 (0.02%) |  |
| 8 |  | 46.00 (0.06%) | 0.00 (0.00%) | 46.00 (0.11%) |  |
| Nature du toit | 78,388 |  |  |  |  |
| 1 |  | 19,807.00 (25.27%) | 19,679.00 (55.60%) | 128.00 (0.30%) |  |
| 2 |  | 45,833.00 (58.47%) | 14,376.00 (40.61%) | 31,457.00 (73.17%) |  |
| 3 |  | 11,663.00 (14.88%) | 967.00 (2.73%) | 10,696.00 (24.88%) |  |
| 4 |  | 757.00 (0.97%) | 56.00 (0.16%) | 701.00 (1.63%) |  |
| 5 |  | 328.00 (0.42%) | 318.00 (0.90%) | 10.00 (0.02%) |  |
| Nature du mur | 78,388 |  |  |  |  |
| 1 |  | 70,711.00 (90.21%) | 34,518.00 (97.52%) | 36,193.00 (84.19%) |  |
| 2 |  | 6,933.00 (8.84%) | 579.00 (1.64%) | 6,354.00 (14.78%) |  |
| 3 |  | 383.00 (0.49%) | 207.00 (0.58%) | 176.00 (0.41%) |  |
| 4 |  | 81.00 (0.10%) | 5.00 (0.01%) | 76.00 (0.18%) |  |
| 5 |  | 197.00 (0.25%) | 87.00 (0.25%) | 110.00 (0.26%) |  |
| 6 |  | 5.00 (0.01%) | 0.00 (0.00%) | 5.00 (0.01%) |  |
| 7 |  | 2.00 (0.00%) | 0.00 (0.00%) | 2.00 (0.00%) |  |
| 8 |  | 76.00 (0.10%) | 0.00 (0.00%) | 76.00 (0.18%) |  |
| Combustible (cuisine) | 78,388 |  |  |  |  |
| 1 |  | 1,854.00 (2.37%) | 856.00 (2.42%) | 998.00 (2.32%) |  |
| 2 |  | 9,901.00 (12.63%) | 2,398.00 (6.77%) | 7,503.00 (17.45%) |  |
| 3 |  | 64,982.00 (82.90%) | 31,499.00 (88.99%) | 33,483.00 (77.88%) |  |
| 4 |  | 179.00 (0.23%) | 102.00 (0.29%) | 77.00 (0.18%) |  |
| 5 |  | 542.00 (0.69%) | 541.00 (1.53%) | 1.00 (0.00%) |  |
| 6 |  | 930.00 (1.19%) | 0.00 (0.00%) | 930.00 (2.16%) |  |
| Éclairage | 78,388 |  |  |  |  |
| 1 |  | 72,439.00 (92.41%) | 31,001.00 (87.58%) | 41,438.00 (96.39%) |  |
| 2 |  | 149.00 (0.19%) | 85.00 (0.24%) | 64.00 (0.15%) |  |
| 3 |  | 278.00 (0.35%) | 268.00 (0.76%) | 10.00 (0.02%) |  |
| 4 |  | 160.00 (0.20%) | 88.00 (0.25%) | 72.00 (0.17%) |  |
| 5 |  | 178.00 (0.23%) | 160.00 (0.45%) | 18.00 (0.04%) |  |
| 6 |  | 526.00 (0.67%) | 470.00 (1.33%) | 56.00 (0.13%) |  |
| 7 |  | 4,429.00 (5.65%) | 3,239.00 (9.15%) | 1,190.00 (2.77%) |  |
| 8 |  | 64.00 (0.08%) | 37.00 (0.10%) | 27.00 (0.06%) |  |
| 9 |  | 116.00 (0.15%) | 48.00 (0.14%) | 68.00 (0.16%) |  |
| 10 |  | 49.00 (0.06%) | 0.00 (0.00%) | 49.00 (0.11%) |  |
| Approv. en eau | 78,388 |  |  |  |  |
| 1 |  | 30,802.00 (39.29%) | 721.00 (2.04%) | 30,081.00 (69.97%) |  |
| 2 |  | 11,667.00 (14.88%) | 656.00 (1.85%) | 11,011.00 (25.61%) |  |
| 3 |  | 32,353.00 (41.27%) | 31,216.00 (88.19%) | 1,137.00 (2.64%) |  |
| 4 |  | 2,290.00 (2.92%) | 2,070.00 (5.85%) | 220.00 (0.51%) |  |
| 5 |  | 53.00 (0.07%) | 37.00 (0.10%) | 16.00 (0.04%) |  |
| 6 |  | 561.00 (0.72%) | 557.00 (1.57%) | 4.00 (0.01%) |  |
| 7 |  | 435.00 (0.55%) | 19.00 (0.05%) | 416.00 (0.97%) |  |
| 8 |  | 127.00 (0.16%) | 120.00 (0.34%) | 7.00 (0.02%) |  |
| 9 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |
| 10 |  | 2.00 (0.00%) | 0.00 (0.00%) | 2.00 (0.00%) |  |
| 11 |  | 97.00 (0.12%) | 0.00 (0.00%) | 97.00 (0.23%) |  |
| Type d'aisance | 78,388 |  |  |  |  |
| 1 |  | 16,904.00 (21.56%) | 5,677.00 (16.04%) | 11,227.00 (26.11%) |  |
| 2 |  | 46,450.00 (59.26%) | 19,976.00 (56.44%) | 26,474.00 (61.58%) |  |
| 3 |  | 11,451.00 (14.61%) | 8,641.00 (24.41%) | 2,810.00 (6.54%) |  |
| 4 |  | 1,873.00 (2.39%) | 293.00 (0.83%) | 1,580.00 (3.68%) |  |
| 5 |  | 877.00 (1.12%) | 383.00 (1.08%) | 494.00 (1.15%) |  |
| 6 |  | 510.00 (0.65%) | 426.00 (1.20%) | 84.00 (0.20%) |  |
| 7 |  | 236.00 (0.30%) | 0.00 (0.00%) | 236.00 (0.55%) |  |
| 8 |  | 87.00 (0.11%) | 0.00 (0.00%) | 87.00 (0.20%) |  |
| Statut d'occupation | 78,388 |  |  |  |  |
| 1 |  | 32,410.00 (41.35%) | 15,526.00 (43.86%) | 16,884.00 (39.27%) |  |
| 2 |  | 2,417.00 (3.08%) | 875.00 (2.47%) | 1,542.00 (3.59%) |  |
| 3 |  | 36,804.00 (46.95%) | 17,732.00 (50.10%) | 19,072.00 (44.36%) |  |
| 4 |  | 4,082.00 (5.21%) | 240.00 (0.68%) | 3,842.00 (8.94%) |  |
| 5 |  | 765.00 (0.98%) | 755.00 (2.13%) | 10.00 (0.02%) |  |
| 6 |  | 418.00 (0.53%) | 268.00 (0.76%) | 150.00 (0.35%) |  |
| 7 |  | 1,156.00 (1.47%) | 0.00 (0.00%) | 1,156.00 (2.69%) |  |
| 8 |  | 336.00 (0.43%) | 0.00 (0.00%) | 336.00 (0.78%) |  |
| Nombre de pièces occupées | 78,388 |  |  |  |  |
| 1 |  | 21,465.00 (27.38%) | 9,677.00 (27.34%) | 11,788.00 (27.42%) |  |
| 2 |  | 11,684.00 (14.91%) | 5,751.00 (16.25%) | 5,933.00 (13.80%) |  |
| 3 |  | 12,815.00 (16.35%) | 6,549.00 (18.50%) | 6,266.00 (14.57%) |  |
| 4 |  | 11,670.00 (14.89%) | 5,375.00 (15.19%) | 6,295.00 (14.64%) |  |
| 5 |  | 8,763.00 (11.18%) | 3,744.00 (10.58%) | 5,019.00 (11.67%) |  |
| 6 |  | 5,002.00 (6.38%) | 2,112.00 (5.97%) | 2,890.00 (6.72%) |  |
| 7 |  | 2,762.00 (3.52%) | 994.00 (2.81%) | 1,768.00 (4.11%) |  |
| 8 |  | 1,807.00 (2.31%) | 562.00 (1.59%) | 1,245.00 (2.90%) |  |
| 9 |  | 776.00 (0.99%) | 241.00 (0.68%) | 535.00 (1.24%) |  |
| 10 |  | 730.00 (0.93%) | 188.00 (0.53%) | 542.00 (1.26%) |  |
| 11 |  | 237.00 (0.30%) | 59.00 (0.17%) | 178.00 (0.41%) |  |
| 12 |  | 284.00 (0.36%) | 49.00 (0.14%) | 235.00 (0.55%) |  |
| 13 |  | 102.00 (0.13%) | 28.00 (0.08%) | 74.00 (0.17%) |  |
| 14 |  | 78.00 (0.10%) | 17.00 (0.05%) | 61.00 (0.14%) |  |
| 15 |  | 81.00 (0.10%) | 11.00 (0.03%) | 70.00 (0.16%) |  |
| 16 |  | 37.00 (0.05%) | 9.00 (0.03%) | 28.00 (0.07%) |  |
| 17 |  | 14.00 (0.02%) | 3.00 (0.01%) | 11.00 (0.03%) |  |
| 18 |  | 23.00 (0.03%) | 4.00 (0.01%) | 19.00 (0.04%) |  |
| 19 |  | 15.00 (0.02%) | 4.00 (0.01%) | 11.00 (0.03%) |  |
| 20 |  | 10.00 (0.01%) | 3.00 (0.01%) | 7.00 (0.02%) |  |
| 21 |  | 5.00 (0.01%) | 2.00 (0.01%) | 3.00 (0.01%) |  |
| 22 |  | 2.00 (0.00%) | 1.00 (0.00%) | 1.00 (0.00%) |  |
| 23 |  | 4.00 (0.01%) | 1.00 (0.00%) | 3.00 (0.01%) |  |
| 24 |  | 7.00 (0.01%) | 2.00 (0.01%) | 5.00 (0.01%) |  |
| 25 |  | 4.00 (0.01%) | 2.00 (0.01%) | 2.00 (0.00%) |  |
| 26 |  | 5.00 (0.01%) | 3.00 (0.01%) | 2.00 (0.00%) |  |
| 27 |  | 2.00 (0.00%) | 1.00 (0.00%) | 1.00 (0.00%) |  |
| 28 |  | 3.00 (0.00%) | 3.00 (0.01%) | 0.00 (0.00%) |  |
| 29 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |
| Type logement | 78,388 |  |  |  |  |
| 1 |  | 294.00 (0.38%) | 33.00 (0.09%) | 261.00 (0.61%) |  |
| 2 |  | 1,204.00 (1.54%) | 685.00 (1.94%) | 519.00 (1.21%) |  |
| 3 |  | 23,759.00 (30.31%) | 23,279.00 (65.77%) | 480.00 (1.12%) |  |
| 4 |  | 29,994.00 (38.26%) | 10,984.00 (31.03%) | 19,010.00 (44.22%) |  |
| 5 |  | 21,370.00 (27.26%) | 312.00 (0.88%) | 21,058.00 (48.98%) |  |
| 6 |  | 1,767.00 (2.25%) | 103.00 (0.29%) | 1,664.00 (3.87%) |  |
| 1n (%) | | | | | |

### Household size

#For the RGPH 2002 dataset  
#OK  
#For the RGPH 2013 dataset

### Head of household

cm\_var=c("niveau\_instruction\_cm","sexe\_cm","age\_cm")  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,niveau\_instruction\_cm,sexe\_cm,age\_cm) %>%  
   
 mutate(sexe\_cm = as.factor(ifelse(sexe\_cm ==2, 0, 1)) %>%   
 structure(label = Hmisc::label(menage\_2002$sexe\_cm))) %>%   
  
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,niveau\_instruction\_cm,sexe\_cm,age\_cm) %>%  
   
 mutate(sexe\_cm = as.factor(ifelse(sexe\_cm ==2, 0, 1)) %>%   
 structure(label = Hmisc::label(menage\_2013$sexe\_cm))))%>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
 label = list(sexe\_cm ~ "Sexe (Masculin = 1, Féminin = 0)",  
 age\_cm ~ "Age (en année)",  
 niveau\_instruction\_cm ~ "Nbr d'années d'éducation"),  
 type = c(c("age\_cm","niveau\_instruction\_cm")~"continuous",  
 c("sexe\_cm")~"dichotomous"),  
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%)",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Charactéristiques du CM") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Charactéristiques du CM | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Nbr d'années d'éducation | 59,414 | 8.13 (6.62) | 5.08 (6.09) | 12.62 (4.46) | -7.5 | -7.6, -7.5 | <0.001 |
| (Missing) |  | 18,974 | 0 | 18,974 |  |  |  |
| Sexe (Masculin = 1, Féminin = 0) | 78,388 | 56,553.00 (72.14%) | 27,262.00 (77.02%) | 29,291.00 (68.13%) | 8.9% |  | <0.001 |
| Age (en année) | 78,388 | 47.95 (13.97) | 47.13 (13.68) | 48.62 (14.17) | -1.5 | -1.7, -1.3 | <0.001 |
| 1Mean (SD); n (%) | | | | | | | |
| 2Welch Two Sample t-test; 3-sample test for equality of proportions without continuity correction | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

### Household composition

liencm\_var=c("liencm\_cm","liencm\_epous","liencm\_enf","liencm\_parent","liencm\_frere","liencm\_petit\_fils","liencm\_sans\_lien")  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,liencm\_cm,liencm\_epous,liencm\_enf,liencm\_parent,liencm\_frere,liencm\_petit\_fils,liencm\_sans\_lien) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,liencm\_cm,liencm\_epous,liencm\_enf,liencm\_parent,liencm\_frere,liencm\_petit\_fils,liencm\_sans\_lien)) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
   
 label = list(liencm\_cm ~ "CM",  
 liencm\_epous ~ "Épouse",  
 liencm\_enf ~ "Enfant",  
 liencm\_parent ~ "Parent/Grand parent",  
 liencm\_frere ~ "Frére/soeur",  
 liencm\_petit\_fils ~ "Pétit fils/fille",  
 liencm\_sans\_lien ~ "Sans lien"),  
   
 type = c(liencm\_var~"categorical"),  
   
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%)",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "Lien avec le CM") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| Lien avec le CM | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 |
| --- | --- | --- | --- | --- | --- | --- |
| CM | 78,388 |  |  |  | 0.26 | 0.25, 0.28 |
| 1 |  | 76,669.00 (97.81%) | 33,677.00 (95.14%) | 42,992.00 (100.00%) |  |  |
| 2 |  | 492.00 (0.63%) | 492.00 (1.39%) | 0.00 (0.00%) |  |  |
| 3 |  | 441.00 (0.56%) | 441.00 (1.25%) | 0.00 (0.00%) |  |  |
| 4 |  | 288.00 (0.37%) | 288.00 (0.81%) | 0.00 (0.00%) |  |  |
| 5 |  | 175.00 (0.22%) | 175.00 (0.49%) | 0.00 (0.00%) |  |  |
| 6 |  | 144.00 (0.18%) | 144.00 (0.41%) | 0.00 (0.00%) |  |  |
| 7 |  | 98.00 (0.13%) | 98.00 (0.28%) | 0.00 (0.00%) |  |  |
| 9 |  | 81.00 (0.10%) | 81.00 (0.23%) | 0.00 (0.00%) |  |  |
| Épouse | 78,388 |  |  |  | 0.22 | 0.21, 0.23 |
| 0 |  | 30,959.00 (39.49%) | 13,052.00 (36.87%) | 17,907.00 (41.65%) |  |  |
| 1 |  | 41,336.00 (52.73%) | 18,389.00 (51.95%) | 22,947.00 (53.38%) |  |  |
| 2 |  | 4,620.00 (5.89%) | 2,772.00 (7.83%) | 1,848.00 (4.30%) |  |  |
| 3 |  | 884.00 (1.13%) | 641.00 (1.81%) | 243.00 (0.57%) |  |  |
| 4 |  | 398.00 (0.51%) | 356.00 (1.01%) | 42.00 (0.10%) |  |  |
| 5 |  | 69.00 (0.09%) | 66.00 (0.19%) | 3.00 (0.01%) |  |  |
| 6 |  | 120.00 (0.15%) | 119.00 (0.34%) | 1.00 (0.00%) |  |  |
| 7 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 10 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| Enfant | 78,388 |  |  |  | 0.03 | 0.02, 0.05 |
| 0 |  | 16,057.00 (20.48%) | 7,479.00 (21.13%) | 8,578.00 (19.95%) |  |  |
| 1 |  | 8,233.00 (10.50%) | 3,861.00 (10.91%) | 4,372.00 (10.17%) |  |  |
| 2 |  | 9,546.00 (12.18%) | 4,179.00 (11.81%) | 5,367.00 (12.48%) |  |  |
| 3 |  | 9,972.00 (12.72%) | 4,186.00 (11.83%) | 5,786.00 (13.46%) |  |  |
| 4 |  | 9,038.00 (11.53%) | 3,809.00 (10.76%) | 5,229.00 (12.16%) |  |  |
| 5 |  | 7,517.00 (9.59%) | 3,332.00 (9.41%) | 4,185.00 (9.73%) |  |  |
| 6 |  | 5,526.00 (7.05%) | 2,567.00 (7.25%) | 2,959.00 (6.88%) |  |  |
| 7 |  | 3,748.00 (4.78%) | 1,760.00 (4.97%) | 1,988.00 (4.62%) |  |  |
| 8 |  | 2,608.00 (3.33%) | 1,234.00 (3.49%) | 1,374.00 (3.20%) |  |  |
| 9 |  | 1,745.00 (2.23%) | 807.00 (2.28%) | 938.00 (2.18%) |  |  |
| 10 |  | 1,146.00 (1.46%) | 476.00 (1.34%) | 670.00 (1.56%) |  |  |
| 11 |  | 799.00 (1.02%) | 379.00 (1.07%) | 420.00 (0.98%) |  |  |
| 12 |  | 683.00 (0.87%) | 364.00 (1.03%) | 319.00 (0.74%) |  |  |
| 13 |  | 460.00 (0.59%) | 218.00 (0.62%) | 242.00 (0.56%) |  |  |
| 14 |  | 358.00 (0.46%) | 214.00 (0.60%) | 144.00 (0.33%) |  |  |
| 15 |  | 281.00 (0.36%) | 152.00 (0.43%) | 129.00 (0.30%) |  |  |
| 16 |  | 179.00 (0.23%) | 88.00 (0.25%) | 91.00 (0.21%) |  |  |
| 17 |  | 129.00 (0.16%) | 81.00 (0.23%) | 48.00 (0.11%) |  |  |
| 18 |  | 135.00 (0.17%) | 96.00 (0.27%) | 39.00 (0.09%) |  |  |
| 19 |  | 44.00 (0.06%) | 19.00 (0.05%) | 25.00 (0.06%) |  |  |
| 20 |  | 33.00 (0.04%) | 11.00 (0.03%) | 22.00 (0.05%) |  |  |
| 21 |  | 31.00 (0.04%) | 12.00 (0.03%) | 19.00 (0.04%) |  |  |
| 22 |  | 29.00 (0.04%) | 13.00 (0.04%) | 16.00 (0.04%) |  |  |
| 23 |  | 7.00 (0.01%) | 1.00 (0.00%) | 6.00 (0.01%) |  |  |
| 24 |  | 26.00 (0.03%) | 20.00 (0.06%) | 6.00 (0.01%) |  |  |
| 25 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 26 |  | 41.00 (0.05%) | 36.00 (0.10%) | 5.00 (0.01%) |  |  |
| 27 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 28 |  | 4.00 (0.01%) | 0.00 (0.00%) | 4.00 (0.01%) |  |  |
| 29 |  | 6.00 (0.01%) | 1.00 (0.00%) | 5.00 (0.01%) |  |  |
| 30 |  | 2.00 (0.00%) | 0.00 (0.00%) | 2.00 (0.00%) |  |  |
| 31 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 38 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 42 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| Parent/Grand parent | 78,388 |  |  |  | 0.51 | 0.49, 0.52 |
| 0 |  | 49,687.00 (63.39%) | 17,167.00 (48.50%) | 32,520.00 (75.64%) |  |  |
| 1 |  | 12,129.00 (15.47%) | 6,391.00 (18.06%) | 5,738.00 (13.35%) |  |  |
| 2 |  | 5,810.00 (7.41%) | 3,736.00 (10.55%) | 2,074.00 (4.82%) |  |  |
| 3 |  | 3,309.00 (4.22%) | 2,329.00 (6.58%) | 980.00 (2.28%) |  |  |
| 4 |  | 2,308.00 (2.94%) | 1,707.00 (4.82%) | 601.00 (1.40%) |  |  |
| 5 |  | 1,359.00 (1.73%) | 1,054.00 (2.98%) | 305.00 (0.71%) |  |  |
| 6 |  | 1,156.00 (1.47%) | 927.00 (2.62%) | 229.00 (0.53%) |  |  |
| 7 |  | 671.00 (0.86%) | 520.00 (1.47%) | 151.00 (0.35%) |  |  |
| 8 |  | 482.00 (0.61%) | 396.00 (1.12%) | 86.00 (0.20%) |  |  |
| 9 |  | 375.00 (0.48%) | 291.00 (0.82%) | 84.00 (0.20%) |  |  |
| 10 |  | 297.00 (0.38%) | 236.00 (0.67%) | 61.00 (0.14%) |  |  |
| 11 |  | 180.00 (0.23%) | 142.00 (0.40%) | 38.00 (0.09%) |  |  |
| 12 |  | 182.00 (0.23%) | 145.00 (0.41%) | 37.00 (0.09%) |  |  |
| 13 |  | 101.00 (0.13%) | 80.00 (0.23%) | 21.00 (0.05%) |  |  |
| 14 |  | 77.00 (0.10%) | 63.00 (0.18%) | 14.00 (0.03%) |  |  |
| 15 |  | 57.00 (0.07%) | 43.00 (0.12%) | 14.00 (0.03%) |  |  |
| 16 |  | 46.00 (0.06%) | 38.00 (0.11%) | 8.00 (0.02%) |  |  |
| 17 |  | 44.00 (0.06%) | 39.00 (0.11%) | 5.00 (0.01%) |  |  |
| 18 |  | 26.00 (0.03%) | 24.00 (0.07%) | 2.00 (0.00%) |  |  |
| 19 |  | 15.00 (0.02%) | 10.00 (0.03%) | 5.00 (0.01%) |  |  |
| 20 |  | 11.00 (0.01%) | 7.00 (0.02%) | 4.00 (0.01%) |  |  |
| 21 |  | 10.00 (0.01%) | 7.00 (0.02%) | 3.00 (0.01%) |  |  |
| 22 |  | 15.00 (0.02%) | 14.00 (0.04%) | 1.00 (0.00%) |  |  |
| 23 |  | 9.00 (0.01%) | 6.00 (0.02%) | 3.00 (0.01%) |  |  |
| 24 |  | 6.00 (0.01%) | 5.00 (0.01%) | 1.00 (0.00%) |  |  |
| 25 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 26 |  | 4.00 (0.01%) | 1.00 (0.00%) | 3.00 (0.01%) |  |  |
| 27 |  | 3.00 (0.00%) | 2.00 (0.01%) | 1.00 (0.00%) |  |  |
| 28 |  | 5.00 (0.01%) | 3.00 (0.01%) | 2.00 (0.00%) |  |  |
| 29 |  | 3.00 (0.00%) | 3.00 (0.01%) | 0.00 (0.00%) |  |  |
| 30 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 31 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 32 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 34 |  | 2.00 (0.00%) | 1.00 (0.00%) | 1.00 (0.00%) |  |  |
| 35 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 37 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 38 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 39 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 46 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| Frére/soeur | 78,388 |  |  |  | -0.03 | -0.04, -0.01 |
| 0 |  | 62,299.00 (79.48%) | 28,293.00 (79.93%) | 34,006.00 (79.10%) |  |  |
| 1 |  | 9,068.00 (11.57%) | 4,188.00 (11.83%) | 4,880.00 (11.35%) |  |  |
| 2 |  | 3,453.00 (4.41%) | 1,422.00 (4.02%) | 2,031.00 (4.72%) |  |  |
| 3 |  | 1,600.00 (2.04%) | 672.00 (1.90%) | 928.00 (2.16%) |  |  |
| 4 |  | 816.00 (1.04%) | 301.00 (0.85%) | 515.00 (1.20%) |  |  |
| 5 |  | 502.00 (0.64%) | 225.00 (0.64%) | 277.00 (0.64%) |  |  |
| 6 |  | 264.00 (0.34%) | 99.00 (0.28%) | 165.00 (0.38%) |  |  |
| 7 |  | 135.00 (0.17%) | 51.00 (0.14%) | 84.00 (0.20%) |  |  |
| 8 |  | 154.00 (0.20%) | 107.00 (0.30%) | 47.00 (0.11%) |  |  |
| 9 |  | 36.00 (0.05%) | 12.00 (0.03%) | 24.00 (0.06%) |  |  |
| 10 |  | 20.00 (0.03%) | 9.00 (0.03%) | 11.00 (0.03%) |  |  |
| 11 |  | 13.00 (0.02%) | 6.00 (0.02%) | 7.00 (0.02%) |  |  |
| 12 |  | 14.00 (0.02%) | 5.00 (0.01%) | 9.00 (0.02%) |  |  |
| 13 |  | 4.00 (0.01%) | 3.00 (0.01%) | 1.00 (0.00%) |  |  |
| 14 |  | 3.00 (0.00%) | 2.00 (0.01%) | 1.00 (0.00%) |  |  |
| 15 |  | 3.00 (0.00%) | 0.00 (0.00%) | 3.00 (0.01%) |  |  |
| 17 |  | 3.00 (0.00%) | 1.00 (0.00%) | 2.00 (0.00%) |  |  |
| 22 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| Pétit fils/fille | 78,388 |  |  |  | -0.08 | -0.10, -0.07 |
| 0 |  | 60,156.00 (76.74%) | 27,513.00 (77.73%) | 32,643.00 (75.93%) |  |  |
| 1 |  | 5,662.00 (7.22%) | 2,777.00 (7.85%) | 2,885.00 (6.71%) |  |  |
| 2 |  | 3,726.00 (4.75%) | 1,617.00 (4.57%) | 2,109.00 (4.91%) |  |  |
| 3 |  | 2,512.00 (3.20%) | 1,034.00 (2.92%) | 1,478.00 (3.44%) |  |  |
| 4 |  | 1,756.00 (2.24%) | 728.00 (2.06%) | 1,028.00 (2.39%) |  |  |
| 5 |  | 1,233.00 (1.57%) | 501.00 (1.42%) | 732.00 (1.70%) |  |  |
| 6 |  | 872.00 (1.11%) | 322.00 (0.91%) | 550.00 (1.28%) |  |  |
| 7 |  | 675.00 (0.86%) | 257.00 (0.73%) | 418.00 (0.97%) |  |  |
| 8 |  | 490.00 (0.63%) | 193.00 (0.55%) | 297.00 (0.69%) |  |  |
| 9 |  | 349.00 (0.45%) | 112.00 (0.32%) | 237.00 (0.55%) |  |  |
| 10 |  | 255.00 (0.33%) | 83.00 (0.23%) | 172.00 (0.40%) |  |  |
| 11 |  | 203.00 (0.26%) | 81.00 (0.23%) | 122.00 (0.28%) |  |  |
| 12 |  | 151.00 (0.19%) | 57.00 (0.16%) | 94.00 (0.22%) |  |  |
| 13 |  | 91.00 (0.12%) | 27.00 (0.08%) | 64.00 (0.15%) |  |  |
| 14 |  | 67.00 (0.09%) | 24.00 (0.07%) | 43.00 (0.10%) |  |  |
| 15 |  | 58.00 (0.07%) | 22.00 (0.06%) | 36.00 (0.08%) |  |  |
| 16 |  | 44.00 (0.06%) | 14.00 (0.04%) | 30.00 (0.07%) |  |  |
| 17 |  | 20.00 (0.03%) | 11.00 (0.03%) | 9.00 (0.02%) |  |  |
| 18 |  | 18.00 (0.02%) | 6.00 (0.02%) | 12.00 (0.03%) |  |  |
| 19 |  | 10.00 (0.01%) | 4.00 (0.01%) | 6.00 (0.01%) |  |  |
| 20 |  | 12.00 (0.02%) | 2.00 (0.01%) | 10.00 (0.02%) |  |  |
| 21 |  | 2.00 (0.00%) | 1.00 (0.00%) | 1.00 (0.00%) |  |  |
| 22 |  | 6.00 (0.01%) | 2.00 (0.01%) | 4.00 (0.01%) |  |  |
| 23 |  | 7.00 (0.01%) | 2.00 (0.01%) | 5.00 (0.01%) |  |  |
| 24 |  | 5.00 (0.01%) | 3.00 (0.01%) | 2.00 (0.00%) |  |  |
| 25 |  | 2.00 (0.00%) | 2.00 (0.01%) | 0.00 (0.00%) |  |  |
| 28 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 30 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 32 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 34 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 37 |  | 2.00 (0.00%) | 1.00 (0.00%) | 1.00 (0.00%) |  |  |
| Sans lien | 78,388 |  |  |  | 0.12 | 0.11, 0.14 |
| 0 |  | 67,378.00 (85.95%) | 29,650.00 (83.77%) | 37,728.00 (87.76%) |  |  |
| 1 |  | 7,110.00 (9.07%) | 3,473.00 (9.81%) | 3,637.00 (8.46%) |  |  |
| 2 |  | 2,185.00 (2.79%) | 1,235.00 (3.49%) | 950.00 (2.21%) |  |  |
| 3 |  | 740.00 (0.94%) | 411.00 (1.16%) | 329.00 (0.77%) |  |  |
| 4 |  | 390.00 (0.50%) | 243.00 (0.69%) | 147.00 (0.34%) |  |  |
| 5 |  | 178.00 (0.23%) | 118.00 (0.33%) | 60.00 (0.14%) |  |  |
| 6 |  | 125.00 (0.16%) | 69.00 (0.19%) | 56.00 (0.13%) |  |  |
| 7 |  | 117.00 (0.15%) | 95.00 (0.27%) | 22.00 (0.05%) |  |  |
| 8 |  | 49.00 (0.06%) | 30.00 (0.08%) | 19.00 (0.04%) |  |  |
| 9 |  | 26.00 (0.03%) | 15.00 (0.04%) | 11.00 (0.03%) |  |  |
| 10 |  | 19.00 (0.02%) | 10.00 (0.03%) | 9.00 (0.02%) |  |  |
| 11 |  | 18.00 (0.02%) | 11.00 (0.03%) | 7.00 (0.02%) |  |  |
| 12 |  | 7.00 (0.01%) | 4.00 (0.01%) | 3.00 (0.01%) |  |  |
| 13 |  | 9.00 (0.01%) | 6.00 (0.02%) | 3.00 (0.01%) |  |  |
| 14 |  | 18.00 (0.02%) | 16.00 (0.05%) | 2.00 (0.00%) |  |  |
| 15 |  | 6.00 (0.01%) | 2.00 (0.01%) | 4.00 (0.01%) |  |  |
| 16 |  | 4.00 (0.01%) | 3.00 (0.01%) | 1.00 (0.00%) |  |  |
| 17 |  | 4.00 (0.01%) | 2.00 (0.01%) | 2.00 (0.00%) |  |  |
| 18 |  | 3.00 (0.00%) | 2.00 (0.01%) | 1.00 (0.00%) |  |  |
| 19 |  | 1.00 (0.00%) | 1.00 (0.00%) | 0.00 (0.00%) |  |  |
| 29 |  | 1.00 (0.00%) | 0.00 (0.00%) | 1.00 (0.00%) |  |  |
| 1n (%) | | | | | | |
| 2Standardized Mean Difference | | | | | | |
| 3CI = Confidence Interval | | | | | | |

# Multivariate calculation for poverty indices (MPI)

mpi\_var=c("cooking\_fuel\_dim","sanitation\_dim","drinking\_water\_dim","electricity\_dim","housing\_dim","assets\_dim","school\_attendance\_dim","years\_schooling\_dim","deces\_under\_five\_dim")  
  
#For the RGPH 2002 dataset  
menage\_2002 %>%   
   
 # Selecting relevant variables  
 select(RGPH,cooking\_fuel\_dim,sanitation\_dim,drinking\_water\_dim,electricity\_dim,housing\_dim,assets\_dim,school\_attendance\_dim,years\_schooling\_dim,deces\_under\_five\_dim) %>%   
   
 plyr::rbind.fill(  
   
 #For the RGPH 2013 dataset   
 menage\_2013 %>%   
   
 # Selecting relevant variables  
 select(RGPH,cooking\_fuel\_dim,sanitation\_dim,drinking\_water\_dim,electricity\_dim,housing\_dim,assets\_dim,school\_attendance\_dim,years\_schooling\_dim  
 #, deces\_under\_five\_dim  
 )) %>%   
  
# Generate a summary table using "tbl\_summary" for the specified columns  
 tbl\_summary(  
 by = RGPH, # Group by "RGPH" column  
   
 label = list(school\_attendance\_dim ~ " School Attendance",  
 deces\_under\_five\_dim ~ "Under five mortality"),  
   
 type = c(mpi\_var~"categorical"),  
   
 statistic = list(  
 all\_categorical() ~ "{n} ({p}%)",  
 all\_continuous() ~ "{mean} ({sd})"  
 ),  
 missing\_text = "(Missing)",  
 digits = everything() ~ c(2,2),  
 #missing = "no"  
 ) %>%   
  
 # Modify the table header to provide a descriptive label  
 modify\_header(label ~ "MPI Dimension") %>%  
 add\_overall() %>%  
 add\_n()%>%   
 # Add difference statistics to the table  
 add\_difference()

| MPI Dimension | **N** | **Overall**, N = 78,3881 | **2002**, N = 35,3961 | **2013**, N = 42,9921 | **Difference**2 | **95% CI**23 | **p-value**2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Standard of living: cooking fuel | 78,388 |  |  |  | -0.31 | -0.32, -0.29 |  |
| 0 |  | 65,161.00 (83.13%) | 31,601.00 (89.28%) | 33,560.00 (78.06%) |  |  |  |
| 1 |  | 13,227.00 (16.87%) | 3,795.00 (10.72%) | 9,432.00 (21.94%) |  |  |  |
| Standard of living: sanitation | 78,388 |  |  |  | -0.08 | -0.09, -0.06 |  |
| 0 |  | 75,299.00 (96.06%) | 34,294.00 (96.89%) | 41,005.00 (95.38%) |  |  |  |
| 1 |  | 3,089.00 (3.94%) | 1,102.00 (3.11%) | 1,987.00 (4.62%) |  |  |  |
| Standard of living: drinking water | 78,388 |  |  |  | 0.27 | 0.26, 0.29 |  |
| 0 |  | 76,768.00 (97.93%) | 33,880.00 (95.72%) | 42,888.00 (99.76%) |  |  |  |
| 1 |  | 1,620.00 (2.07%) | 1,516.00 (4.28%) | 104.00 (0.24%) |  |  |  |
| Standard of living: electricity | 78,388 |  |  |  | 0.29 | 0.28, 0.31 |  |
| 0 |  | 73,186.00 (93.36%) | 31,602.00 (89.28%) | 41,584.00 (96.72%) |  |  |  |
| 1 |  | 5,202.00 (6.64%) | 3,794.00 (10.72%) | 1,408.00 (3.28%) |  |  |  |
| Standard of living: housing | 78,388 |  |  |  | -0.02 | -0.03, 0.00 |  |
| 0 |  | 78,326.00 (99.92%) | 35,377.00 (99.95%) | 42,949.00 (99.90%) |  |  |  |
| 1 |  | 62.00 (0.08%) | 19.00 (0.05%) | 43.00 (0.10%) |  |  |  |
| Standard of living: assets | 78,388 |  |  |  | 0.42 | 0.40, 0.43 |  |
| 0 |  | 72,952.00 (93.07%) | 30,866.00 (87.20%) | 42,086.00 (97.89%) |  |  |  |
| 1 |  | 5,436.00 (6.93%) | 4,530.00 (12.80%) | 906.00 (2.11%) |  |  |  |
| School Attendance | 78,388 |  |  |  | -0.12 | -0.14, -0.11 |  |
| 0 |  | 59,593.00 (76.02%) | 27,917.00 (78.87%) | 31,676.00 (73.68%) |  |  |  |
| 1 |  | 18,795.00 (23.98%) | 7,479.00 (21.13%) | 11,316.00 (26.32%) |  |  |  |
| Education: years of schooling | 78,388 |  |  |  | 0.11 | 0.09, 0.12 |  |
| 0 |  | 68,732.00 (87.68%) | 30,347.00 (85.74%) | 38,385.00 (89.28%) |  |  |  |
| 1 |  | 9,656.00 (12.32%) | 5,049.00 (14.26%) | 4,607.00 (10.72%) |  |  |  |
| Under five mortality | 35,396 |  |  |  |  |  |  |
| 0 |  | 33,360.00 (94.25%) | 33,360.00 (94.25%) | 0.00 (NA%) |  |  |  |
| 1 |  | 1,604.00 (4.53%) | 1,604.00 (4.53%) | 0.00 (NA%) |  |  |  |
| 2 |  | 432.00 (1.22%) | 432.00 (1.22%) | 0.00 (NA%) |  |  |  |
| (Missing) |  | 42,992 | 0 | 42,992 |  |  |  |
| 1n (%) | | | | | | | |
| 2Standardized Mean Difference | | | | | | | |
| 3CI = Confidence Interval | | | | | | | |

## Standard of Living dimension

**Data source**:

* *For the Sanitation*: [link](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/population-using-improved-sanitation-facilities-(-))
* *For water*: [link](https://data.unicef.org/topic/water-and-sanitation/drinking-water/)

*Additionnal cleaning*

## Health dimension

## Removing all objects  
rm(list=ls())