Paul\_BALAFAI\_Devoir

chargement des packages

#verifie si le package pacman est installé, sinon l'installe  
if (!requireNamespace("pacman", quietly = TRUE)) install.packages("pacman")  
#verifie si les packages sont installés, sinon les installe  
pacman::p\_load(tidyverse, gtsummary,haven,labelled,survey,gt)

importation des bases

#base de données de l'enquête  
baseline\_mother <- haven::read\_dta("../data/food\_comp\_mother\_baseline.dta") %>% to\_factor()  
baseline\_child <- haven::read\_dta("../data/food\_comp\_child\_baseline.dta") %>% to\_factor()  
endline\_mother <- haven::read\_dta("../data/food\_comp\_mother\_endline.dta") %>% to\_factor()  
endline\_child <- haven::read\_dta("../data/food\_comp\_child\_endline.dta") %>% to\_factor()  
base\_menage <- haven::read\_dta("../data/base\_menage.dta") %>% to\_factor()

# Partie 1 : Gestion et nettoyage des bases de données

## 1.Vérification et suppression des doublons

# Vérification et suppression des doublons  
baseline\_mother <- baseline\_mother %>% distinct()  
baseline\_child <- baseline\_child %>% distinct()  
endline\_mother <- endline\_mother %>% distinct()  
endline\_child <- endline\_child %>% distinct()  
base\_menage <- base\_menage %>% distinct()

## 2. Assurez-vous que les noms des variables sont cohérents entre les bases de données Baseline et Endline.

# Harmonisation des noms de variables entre les bases de données  
colnames(baseline\_child) == colnames(baseline\_mother)

## [1] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE  
## [13] TRUE FALSE TRUE TRUE TRUE

#baseline mother a des variables differentes de baseline\_child, ajustons les  
colnames(baseline\_mother) <- colnames(baseline\_child)  
  
colnames(endline\_child) == colnames(endline\_mother)

## [1] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE  
## [16] TRUE TRUE

#tout est ok pour les endline

## 3.Correction des données manquantes

# Correction des données manquantes  
baseline\_mother <- baseline\_mother %>% mutate(across(everything(), ~replace\_na(.x, 0)))  
baseline\_child <- baseline\_child %>% mutate(across(everything(), ~replace\_na(.x, 0)))  
endline\_mother <- endline\_mother %>% mutate(across(everything(), ~replace\_na(.x, 0)))  
endline\_child <- endline\_child %>% mutate(across(everything(), ~replace\_na(.x, 0)))

## 4.Calcul de la consommation d’énergie moyenne

# Calcul de la consommation d'énergie moyenne  
mean\_energy\_consumption <- baseline\_mother %>% summarise(mean\_energy = mean(energ\_kcal, na.rm = TRUE))  
print(mean\_energy\_consumption)

## # A tibble: 1 × 1  
## mean\_energy  
## <dbl>  
## 1 602.

## 5.Sauvegarde des bases de données modifiées

# Sauvegarde des bases de données modifiées  
haven::write\_dta(baseline\_mother, "../data/mother\_baseline\_v1.dta")  
haven::write\_dta(endline\_mother, "../data/mother\_endline\_v1.dta")  
haven::write\_dta(baseline\_child, "../data/child\_baseline\_v1.dta")  
haven::write\_dta(endline\_child, "../data/child\_endline\_v1.dta")  
haven::write\_dta(base\_menage, "../data/menage\_v1.dta")

# Partie 2 : Empilement et Fusion des données

#importation des nouvelles bases  
  
baseline\_mother\_v1 <- haven::read\_dta("../data/mother\_baseline\_v1.dta") %>% to\_factor()  
baseline\_child\_v1 <- haven::read\_dta("../data/child\_baseline\_v1.dta") %>% to\_factor()  
endline\_mother\_v1 <- haven::read\_dta("../data/mother\_endline\_v1.dta") %>% to\_factor()  
endline\_child\_v1 <- haven::read\_dta("../data/child\_endline\_v1.dta") %>% to\_factor()

## 1.Empilement des données Baseline et Endline

#### 1.1 baseline

# fusionner toutes les des données Baseline  
baseline\_joint <- dplyr::full\_join(x = baseline\_mother\_v1, y = baseline\_child\_v1, by = "hhid", suffix = c("",""))

## Warning in dplyr::full\_join(x = baseline\_mother\_v1, y = baseline\_child\_v1, : Detected an unexpected many-to-many relationship between `x` and `y`.  
## ℹ Row 1 of `x` matches multiple rows in `y`.  
## ℹ Row 1 of `y` matches multiple rows in `x`.  
## ℹ If a many-to-many relationship is expected, set `relationship =  
## "many-to-many"` to silence this warning.

baseline\_joint <- baseline\_joint %>%  
 rename\_with(~ paste0(., "\_b"), .cols = c("energ\_kcal" , "protein\_g","lipid\_tot\_g", "calcium\_mg" ,"iron\_mg" , "zinc\_mg" , "vit\_b6\_mg", "vit\_b12\_mcg", "vit\_c\_mg" ))  
  
print(head(baseline\_joint))

## # A tibble: 6 × 17  
## regionid communeid villageid hhid round s1\_q0 s1\_q1 s1\_q2 energ\_kcal\_b  
## <dbl> <dbl> <dbl> <chr> <fct> <fct> <fct> <fct> <dbl>  
## 1 2 25 1000 49484848485… Base… Brea… Yes child 355.  
## 2 2 25 1000 49484848485… Base… Lunch Yes child 224.  
## 3 2 25 1000 49484848485… Base… Dinn… Yes child 334.  
## 4 2 25 1000 49484848485… Base… Snac… Yes child 494.  
## 5 2 25 1000 49484848485… Base… Brea… Yes child 355.  
## 6 2 25 1000 49484848485… Base… Lunch Yes child 224.  
## # ℹ 8 more variables: protein\_g\_b <dbl>, lipid\_tot\_g\_b <dbl>,  
## # calcium\_mg\_b <dbl>, iron\_mg\_b <dbl>, zinc\_mg\_b <dbl>, vit\_b6\_mg\_b <dbl>,  
## # vit\_b12\_mcg\_b <dbl>, vit\_c\_mg\_b <dbl>

# Somme des 4 repas par individu  
baseline\_total <- baseline\_joint %>%  
 group\_by(hhid, s1\_q0) %>%  
 summarise(across(ends\_with("\_b"), sum, na.rm = TRUE))

## Warning: There was 1 warning in `summarise()`.  
## ℹ In argument: `across(ends\_with("\_b"), sum, na.rm = TRUE)`.  
## ℹ In group 1: `hhid = "4948484848535052"` and `s1\_q0 = Breakfast`.  
## Caused by warning:  
## ! The `...` argument of `across()` is deprecated as of dplyr 1.1.0.  
## Supply arguments directly to `.fns` through an anonymous function instead.  
##   
## # Previously  
## across(a:b, mean, na.rm = TRUE)  
##   
## # Now  
## across(a:b, \(x) mean(x, na.rm = TRUE))

## `summarise()` has grouped output by 'hhid'. You can override using the  
## `.groups` argument.

# Sélection des variables requises  
baseline\_final <- baseline\_joint %>%  
 select(hhid, s1\_q2, energ\_kcal\_b, protein\_g\_b, lipid\_tot\_g\_b,   
 calcium\_mg\_b, iron\_mg\_b, zinc\_mg\_b)  
  
# Sauvegarde  
haven::write\_dta(baseline\_final, "../data/baseline\_final.dta")

#### 1.2 endline

endline\_joint <- dplyr::full\_join(x = endline\_mother\_v1, y = endline\_child\_v1, by = "hhid", suffix = c("",""))

## Warning in dplyr::full\_join(x = endline\_mother\_v1, y = endline\_child\_v1, : Detected an unexpected many-to-many relationship between `x` and `y`.  
## ℹ Row 1 of `x` matches multiple rows in `y`.  
## ℹ Row 1 of `y` matches multiple rows in `x`.  
## ℹ If a many-to-many relationship is expected, set `relationship =  
## "many-to-many"` to silence this warning.

endline\_joint <- endline\_joint %>%  
 rename\_with(~ paste0(., "\_e"), .cols = c("energ\_kcal" , "protein\_g","lipid\_tot\_g", "calcium\_mg" ,"iron\_mg" , "zinc\_mg" , "vit\_b6\_mg", "vit\_b12\_mcg", "vit\_c\_mg" ))  
  
head(endline\_joint)

## # A tibble: 6 × 17  
## regionid communeid villageid hhid round s1\_q0 s1\_q1 s1\_q2 energ\_kcal\_e  
## <dbl> <dbl> <dbl> <chr> <fct> <fct> <fct> <fct> <dbl>  
## 1 2 25 1000 49484848485… Endl… Brea… Yes child 1193.  
## 2 2 25 1000 49484848485… Endl… Lunch Yes child 535.  
## 3 2 25 1000 49484848485… Endl… Dinn… Yes child 1701.  
## 4 2 25 1000 49484848485… Endl… Snac… Yes child 531.  
## 5 2 25 1000 49484848485… Endl… Brea… Yes child 1193.  
## 6 2 25 1000 49484848485… Endl… Lunch Yes child 535.  
## # ℹ 8 more variables: protein\_g\_e <dbl>, lipid\_tot\_g\_e <dbl>,  
## # calcium\_mg\_e <dbl>, iron\_mg\_e <dbl>, zinc\_mg\_e <dbl>, vit\_b6\_mg\_e <dbl>,  
## # vit\_b12\_mcg\_e <dbl>, vit\_c\_mg\_e <dbl>

# Somme des 4 repas par individu  
endline\_total <- endline\_joint %>%  
 group\_by(hhid, s1\_q0) %>%  
 summarise(across(ends\_with("\_e"), sum, na.rm = TRUE))

## `summarise()` has grouped output by 'hhid'. You can override using the  
## `.groups` argument.

head(endline\_total)

## # A tibble: 6 × 11  
## # Groups: hhid [2]  
## hhid s1\_q0 energ\_kcal\_e protein\_g\_e lipid\_tot\_g\_e calcium\_mg\_e iron\_mg\_e  
## <chr> <fct> <dbl> <dbl> <dbl> <dbl> <dbl>  
## 1 494848484… Brea… 4773. 99.8 208. 1919. 46.3   
## 2 494848484… Lunch 2139. 73.5 12.8 165. 34.8   
## 3 494848484… Dinn… 6803. 235. 361. 4491. 28.9   
## 4 494848484… Snac… 2123. 55.6 15.7 298. 25.7   
## 5 494848484… Brea… 753. 20.2 1.99 13.1 0.128  
## 6 494848484… Lunch 0 0 0 0 0   
## # ℹ 4 more variables: zinc\_mg\_e <dbl>, vit\_b6\_mg\_e <dbl>, vit\_b12\_mcg\_e <dbl>,  
## # vit\_c\_mg\_e <dbl>

endline\_final <- endline\_joint %>%  
 select(hhid, s1\_q2, energ\_kcal\_e, protein\_g\_e, lipid\_tot\_g\_e,   
 calcium\_mg\_e, iron\_mg\_e, zinc\_mg\_e)  
  
haven::write\_dta(endline\_final, "../data/endline\_final.dta")

1. Fusion des données Baseline et Endline

# Fusion des données Baseline et Endline  
merged\_data <- dplyr::full\_join(x = baseline\_final, y = endline\_final, by = "hhid", suffix = c("\_baseline", "\_endline"))

## Warning in dplyr::full\_join(x = baseline\_final, y = endline\_final, by = "hhid", : Detected an unexpected many-to-many relationship between `x` and `y`.  
## ℹ Row 1 of `x` matches multiple rows in `y`.  
## ℹ Row 1 of `y` matches multiple rows in `x`.  
## ℹ If a many-to-many relationship is expected, set `relationship =  
## "many-to-many"` to silence this warning.

# sauvegarde de la base de données fusionnée  
haven::write\_dta(merged\_data, "../data/merged\_data.dta")

1. Fusions de la base menage

base\_finale <- base\_menage %>% dplyr::left\_join(merged\_data, by = "hhid")  
  
  
#sauvegarde de la base  
haven::write\_dta(base\_finale, "../data/base\_finale.dta")

# Partie 3 :Statistiques descriptives avec le package gtsummary

# Création d'un tableau descriptif pour les variables nutritionnelles  
base\_finale %>%  
 select(energ\_kcal\_b, protein\_g\_b, lipid\_tot\_g\_b, calcium\_mg\_b, iron\_mg\_b, zinc\_mg\_b, energ\_kcal\_e, protein\_g\_e, lipid\_tot\_g\_e, calcium\_mg\_e, iron\_mg\_e, zinc\_mg\_e) %>%  
 tbl\_summary() %>% modify\_header(label = "Variables")

| Variables | **N = 272,384***1* |
| --- | --- |
| Consommation en ernergie (kcal) | 310 (184, 481) |
| Consommation en proteine (g) | 9 (5, 15) |
| Consommation en lipide (g) | 2 (1, 8) |
| Consommation en calcium (mg) | 28 (11, 93) |
| Consommation en fer (mg) | 2.9 (0.9, 6.4) |
| Consommation en zinc (mg) | 1.50 (0.84, 2.47) |
| Consommation en ernergie (kcal) | 315 (175, 505) |
| Consommation en proteine (g) | 9 (4, 16) |
| Consommation en lipide (g) | 2 (1, 9) |
| Consommation en calcium (mg) | 20 (6, 84) |
| Consommation en fer (mg) | 2.6 (0.7, 5.7) |
| Consommation en zinc (mg) | 1.44 (0.56, 2.35) |
| *1*Median (Q1, Q3) | |

# Création d'un tableau descriptif pour les variables nutritionnelles  
tableau\_nutrition <- base\_finale %>%  
 select(energ\_kcal\_b, protein\_g\_b, lipid\_tot\_g\_b, calcium\_mg\_b, iron\_mg\_b, zinc\_mg\_b, energ\_kcal\_e, protein\_g\_e, lipid\_tot\_g\_e, calcium\_mg\_e, iron\_mg\_e, zinc\_mg\_e) %>%  
 tbl\_summary(  
 by = NULL, # Pas de variable de regroupement  
 statistic = all\_continuous() ~ "{mean} ({sd})", # Moyenne et écart-type  
 label = list(  
 energ\_kcal\_b ~ "energie (kcal) Baseline",  
 protein\_g\_b ~ "Proteines (g) Baseline",  
 lipid\_tot\_g\_b ~ "Lipides totaux (g) Baseline",  
 calcium\_mg\_b ~ "Calcium (mg) Baseline",  
 iron\_mg\_b ~ "Fer (mg) Baseline",  
 zinc\_mg\_b ~ "Zinc (mg) Baseline",  
 energ\_kcal\_e ~ "energie (kcal) Endline",  
 protein\_g\_e ~ "Proteines (g) Endline",  
 lipid\_tot\_g\_e ~ "Lipides totaux (g) Endline",  
 calcium\_mg\_e ~ "Calcium (mg) Endline",  
 iron\_mg\_e ~ "Fer (mg) Endline",  
 zinc\_mg\_e ~ "Zinc (mg) Endline"  
 )  
 ) %>%  
 modify\_header(label = "Variables") %>%  
 as\_gt() %>%  
 gt::tab\_header(  
 title = "Tableau descriptif des variables nutritionnelles"  
 )  
tableau\_nutrition

Table 1: Tableau descriptif des variables nutritionnelles

| Variables | **N = 272,384***1* |
| --- | --- |
| energie (kcal) Baseline | 375 (328) |
| Proteines (g) Baseline | 12 (17) |
| Lipides totaux (g) Baseline | 7 (14) |
| Calcium (mg) Baseline | 73 (121) |
| Fer (mg) Baseline | 5.0 (6.5) |
| Zinc (mg) Baseline | 1.87 (2.11) |
| energie (kcal) Endline | 382 (348) |
| Proteines (g) Endline | 12 (13) |
| Lipides totaux (g) Endline | 8 (15) |
| Calcium (mg) Endline | 79 (150) |
| Fer (mg) Endline | 4.3 (5.6) |
| Zinc (mg) Endline | 1.73 (1.69) |
| *1*Mean (SD) | |

# Création d'un tableau descriptif pour les variables socio-démographiques  
tableau\_socio\_demo <- base\_finale %>%  
 select( s1\_q2, energ\_kcal\_b, energ\_kcal\_e) %>%  
 tbl\_summary(  
 by = s1\_q2, # Variable de regroupement  
 statistic = list(all\_continuous() ~ "{mean} ({sd})"), # Moyenne et écart-type  
 label = list(  
 energ\_kcal\_b ~ "Energie (kcal) Baseline",  
 energ\_kcal\_e ~ "Energie (kcal) Endline"  
 )  
 ) %>%  
 modify\_header(label = "Variables")  
  
print(tableau\_socio\_demo)

## <div id="iccquqjdfk" style="padding-left:0px;padding-right:0px;padding-top:10px;padding-bottom:10px;overflow-x:auto;overflow-y:auto;width:auto;height:auto;">  
## <style>#iccquqjdfk table {  
## font-family: system-ui, 'Segoe UI', Roboto, Helvetica, Arial, sans-serif, 'Apple Color Emoji', 'Segoe UI Emoji', 'Segoe UI Symbol', 'Noto Color Emoji';  
## -webkit-font-smoothing: antialiased;  
## -moz-osx-font-smoothing: grayscale;  
## }  
##   
## #iccquqjdfk thead, #iccquqjdfk tbody, #iccquqjdfk tfoot, #iccquqjdfk tr, #iccquqjdfk td, #iccquqjdfk th {  
## border-style: none;  
## }  
##   
## #iccquqjdfk p {  
## margin: 0;  
## padding: 0;  
## }  
##   
## #iccquqjdfk .gt\_table {  
## display: table;  
## border-collapse: collapse;  
## line-height: normal;  
## margin-left: auto;  
## margin-right: auto;  
## color: #333333;  
## font-size: 16px;  
## font-weight: normal;  
## font-style: normal;  
## background-color: #FFFFFF;  
## width: auto;  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #A8A8A8;  
## border-right-style: none;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #A8A8A8;  
## border-left-style: none;  
## border-left-width: 2px;  
## border-left-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_caption {  
## padding-top: 4px;  
## padding-bottom: 4px;  
## }  
##   
## #iccquqjdfk .gt\_title {  
## color: #333333;  
## font-size: 125%;  
## font-weight: initial;  
## padding-top: 4px;  
## padding-bottom: 4px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-bottom-color: #FFFFFF;  
## border-bottom-width: 0;  
## }  
##   
## #iccquqjdfk .gt\_subtitle {  
## color: #333333;  
## font-size: 85%;  
## font-weight: initial;  
## padding-top: 3px;  
## padding-bottom: 5px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-top-color: #FFFFFF;  
## border-top-width: 0;  
## }  
##   
## #iccquqjdfk .gt\_heading {  
## background-color: #FFFFFF;  
## text-align: center;  
## border-bottom-color: #FFFFFF;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_bottom\_border {  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_col\_headings {  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_col\_heading {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: normal;  
## text-transform: inherit;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## vertical-align: bottom;  
## padding-top: 5px;  
## padding-bottom: 6px;  
## padding-left: 5px;  
## padding-right: 5px;  
## overflow-x: hidden;  
## }  
##   
## #iccquqjdfk .gt\_column\_spanner\_outer {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: normal;  
## text-transform: inherit;  
## padding-top: 0;  
## padding-bottom: 0;  
## padding-left: 4px;  
## padding-right: 4px;  
## }  
##   
## #iccquqjdfk .gt\_column\_spanner\_outer:first-child {  
## padding-left: 0;  
## }  
##   
## #iccquqjdfk .gt\_column\_spanner\_outer:last-child {  
## padding-right: 0;  
## }  
##   
## #iccquqjdfk .gt\_column\_spanner {  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## vertical-align: bottom;  
## padding-top: 5px;  
## padding-bottom: 5px;  
## overflow-x: hidden;  
## display: inline-block;  
## width: 100%;  
## }  
##   
## #iccquqjdfk .gt\_spanner\_row {  
## border-bottom-style: hidden;  
## }  
##   
## #iccquqjdfk .gt\_group\_heading {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## text-transform: inherit;  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## vertical-align: middle;  
## text-align: left;  
## }  
##   
## #iccquqjdfk .gt\_empty\_group\_heading {  
## padding: 0.5px;  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## vertical-align: middle;  
## }  
##   
## #iccquqjdfk .gt\_from\_md > :first-child {  
## margin-top: 0;  
## }  
##   
## #iccquqjdfk .gt\_from\_md > :last-child {  
## margin-bottom: 0;  
## }  
##   
## #iccquqjdfk .gt\_row {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## margin: 10px;  
## border-top-style: solid;  
## border-top-width: 1px;  
## border-top-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## vertical-align: middle;  
## overflow-x: hidden;  
## }  
##   
## #iccquqjdfk .gt\_stub {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## text-transform: inherit;  
## border-right-style: solid;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #iccquqjdfk .gt\_stub\_row\_group {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## text-transform: inherit;  
## border-right-style: solid;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## padding-left: 5px;  
## padding-right: 5px;  
## vertical-align: top;  
## }  
##   
## #iccquqjdfk .gt\_row\_group\_first td {  
## border-top-width: 2px;  
## }  
##   
## #iccquqjdfk .gt\_row\_group\_first th {  
## border-top-width: 2px;  
## }  
##   
## #iccquqjdfk .gt\_summary\_row {  
## color: #333333;  
## background-color: #FFFFFF;  
## text-transform: inherit;  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #iccquqjdfk .gt\_first\_summary\_row {  
## border-top-style: solid;  
## border-top-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_first\_summary\_row.thick {  
## border-top-width: 2px;  
## }  
##   
## #iccquqjdfk .gt\_last\_summary\_row {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_grand\_summary\_row {  
## color: #333333;  
## background-color: #FFFFFF;  
## text-transform: inherit;  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #iccquqjdfk .gt\_first\_grand\_summary\_row {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-top-style: double;  
## border-top-width: 6px;  
## border-top-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_last\_grand\_summary\_row\_top {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-bottom-style: double;  
## border-bottom-width: 6px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_striped {  
## background-color: rgba(128, 128, 128, 0.05);  
## }  
##   
## #iccquqjdfk .gt\_table\_body {  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_footnotes {  
## color: #333333;  
## background-color: #FFFFFF;  
## border-bottom-style: none;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 2px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_footnote {  
## margin: 0px;  
## font-size: 90%;  
## padding-top: 4px;  
## padding-bottom: 4px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #iccquqjdfk .gt\_sourcenotes {  
## color: #333333;  
## background-color: #FFFFFF;  
## border-bottom-style: none;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 2px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #iccquqjdfk .gt\_sourcenote {  
## font-size: 90%;  
## padding-top: 4px;  
## padding-bottom: 4px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #iccquqjdfk .gt\_left {  
## text-align: left;  
## }  
##   
## #iccquqjdfk .gt\_center {  
## text-align: center;  
## }  
##   
## #iccquqjdfk .gt\_right {  
## text-align: right;  
## font-variant-numeric: tabular-nums;  
## }  
##   
## #iccquqjdfk .gt\_font\_normal {  
## font-weight: normal;  
## }  
##   
## #iccquqjdfk .gt\_font\_bold {  
## font-weight: bold;  
## }  
##   
## #iccquqjdfk .gt\_font\_italic {  
## font-style: italic;  
## }  
##   
## #iccquqjdfk .gt\_super {  
## font-size: 65%;  
## }  
##   
## #iccquqjdfk .gt\_footnote\_marks {  
## font-size: 75%;  
## vertical-align: 0.4em;  
## position: initial;  
## }  
##   
## #iccquqjdfk .gt\_asterisk {  
## font-size: 100%;  
## vertical-align: 0;  
## }  
##   
## #iccquqjdfk .gt\_indent\_1 {  
## text-indent: 5px;  
## }  
##   
## #iccquqjdfk .gt\_indent\_2 {  
## text-indent: 10px;  
## }  
##   
## #iccquqjdfk .gt\_indent\_3 {  
## text-indent: 15px;  
## }  
##   
## #iccquqjdfk .gt\_indent\_4 {  
## text-indent: 20px;  
## }  
##   
## #iccquqjdfk .gt\_indent\_5 {  
## text-indent: 25px;  
## }  
##   
## #iccquqjdfk .katex-display {  
## display: inline-flex !important;  
## margin-bottom: 0.75em !important;  
## }  
##   
## #iccquqjdfk div.Reactable > div.rt-table > div.rt-thead > div.rt-tr.rt-tr-group-header > div.rt-th-group:after {  
## height: 0px !important;  
## }  
## </style>  
## <table class="gt\_table" data-quarto-disable-processing="false" data-quarto-bootstrap="false">  
## <thead>  
## <tr class="gt\_col\_headings">  
## <th class="gt\_col\_heading gt\_columns\_bottom\_border gt\_left" rowspan="1" colspan="1" scope="col" id="label"><span class='gt\_from\_md'>Variables</span></th>  
## <th class="gt\_col\_heading gt\_columns\_bottom\_border gt\_center" rowspan="1" colspan="1" scope="col" id="stat\_1"><span class='gt\_from\_md'><strong>Female</strong><br />  
## N = 7,168</span><span class="gt\_footnote\_marks" style="white-space:nowrap;font-style:italic;font-weight:normal;line-height:0;"><sup>1</sup></span></th>  
## <th class="gt\_col\_heading gt\_columns\_bottom\_border gt\_center" rowspan="1" colspan="1" scope="col" id="stat\_2"><span class='gt\_from\_md'><strong>Male</strong><br />  
## N = 265,216</span><span class="gt\_footnote\_marks" style="white-space:nowrap;font-style:italic;font-weight:normal;line-height:0;"><sup>1</sup></span></th>  
## </tr>  
## </thead>  
## <tbody class="gt\_table\_body">  
## <tr><td headers="label" class="gt\_row gt\_left">Energie (kcal) Baseline</td>  
## <td headers="stat\_1" class="gt\_row gt\_center">249 (199)</td>  
## <td headers="stat\_2" class="gt\_row gt\_center">378 (330)</td></tr>  
## <tr><td headers="label" class="gt\_row gt\_left">Energie (kcal) Endline</td>  
## <td headers="stat\_1" class="gt\_row gt\_center">347 (444)</td>  
## <td headers="stat\_2" class="gt\_row gt\_center">383 (345)</td></tr>  
## </tbody>  
##   
## <tfoot class="gt\_footnotes">  
## <tr>  
## <td class="gt\_footnote" colspan="3"><span class="gt\_footnote\_marks" style="white-space:nowrap;font-style:italic;font-weight:normal;line-height:0;"><sup>1</sup></span> <span class='gt\_from\_md'>Mean (SD)</span></td>  
## </tr>  
## </tfoot>  
## </table>  
## </div>

# Comparaison des variables nutritionnelles entre Baseline et Endline  
comparaison\_nutrition <- base\_finale %>%  
 select(energ\_kcal\_b, energ\_kcal\_e, protein\_g\_b, protein\_g\_e, lipid\_tot\_g\_b, lipid\_tot\_g\_e) %>%  
 tbl\_summary(  
 by = NULL, # Pas de variable de regroupement  
 statistic = list(all\_continuous() ~ "{mean} ({sd})"), # Moyenne et écart-type  
 label = list(  
 energ\_kcal\_b ~ "Energie (kcal) Baseline",  
 energ\_kcal\_e ~ "Energie (kcal) Endline",  
 protein\_g\_b ~ "Proteines (g) Baseline",  
 protein\_g\_e ~ "Proteines (g) Endline",  
 lipid\_tot\_g\_b ~ "Lipides totaux (g) Baseline",  
 lipid\_tot\_g\_e ~ "Lipides totaux (g) Endline"  
 )  
 ) %>%  
 modify\_header(label = "Variables")  
  
print(comparaison\_nutrition)

## <div id="fymosqguvi" style="padding-left:0px;padding-right:0px;padding-top:10px;padding-bottom:10px;overflow-x:auto;overflow-y:auto;width:auto;height:auto;">  
## <style>#fymosqguvi table {  
## font-family: system-ui, 'Segoe UI', Roboto, Helvetica, Arial, sans-serif, 'Apple Color Emoji', 'Segoe UI Emoji', 'Segoe UI Symbol', 'Noto Color Emoji';  
## -webkit-font-smoothing: antialiased;  
## -moz-osx-font-smoothing: grayscale;  
## }  
##   
## #fymosqguvi thead, #fymosqguvi tbody, #fymosqguvi tfoot, #fymosqguvi tr, #fymosqguvi td, #fymosqguvi th {  
## border-style: none;  
## }  
##   
## #fymosqguvi p {  
## margin: 0;  
## padding: 0;  
## }  
##   
## #fymosqguvi .gt\_table {  
## display: table;  
## border-collapse: collapse;  
## line-height: normal;  
## margin-left: auto;  
## margin-right: auto;  
## color: #333333;  
## font-size: 16px;  
## font-weight: normal;  
## font-style: normal;  
## background-color: #FFFFFF;  
## width: auto;  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #A8A8A8;  
## border-right-style: none;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #A8A8A8;  
## border-left-style: none;  
## border-left-width: 2px;  
## border-left-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_caption {  
## padding-top: 4px;  
## padding-bottom: 4px;  
## }  
##   
## #fymosqguvi .gt\_title {  
## color: #333333;  
## font-size: 125%;  
## font-weight: initial;  
## padding-top: 4px;  
## padding-bottom: 4px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-bottom-color: #FFFFFF;  
## border-bottom-width: 0;  
## }  
##   
## #fymosqguvi .gt\_subtitle {  
## color: #333333;  
## font-size: 85%;  
## font-weight: initial;  
## padding-top: 3px;  
## padding-bottom: 5px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-top-color: #FFFFFF;  
## border-top-width: 0;  
## }  
##   
## #fymosqguvi .gt\_heading {  
## background-color: #FFFFFF;  
## text-align: center;  
## border-bottom-color: #FFFFFF;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_bottom\_border {  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_col\_headings {  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_col\_heading {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: normal;  
## text-transform: inherit;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## vertical-align: bottom;  
## padding-top: 5px;  
## padding-bottom: 6px;  
## padding-left: 5px;  
## padding-right: 5px;  
## overflow-x: hidden;  
## }  
##   
## #fymosqguvi .gt\_column\_spanner\_outer {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: normal;  
## text-transform: inherit;  
## padding-top: 0;  
## padding-bottom: 0;  
## padding-left: 4px;  
## padding-right: 4px;  
## }  
##   
## #fymosqguvi .gt\_column\_spanner\_outer:first-child {  
## padding-left: 0;  
## }  
##   
## #fymosqguvi .gt\_column\_spanner\_outer:last-child {  
## padding-right: 0;  
## }  
##   
## #fymosqguvi .gt\_column\_spanner {  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## vertical-align: bottom;  
## padding-top: 5px;  
## padding-bottom: 5px;  
## overflow-x: hidden;  
## display: inline-block;  
## width: 100%;  
## }  
##   
## #fymosqguvi .gt\_spanner\_row {  
## border-bottom-style: hidden;  
## }  
##   
## #fymosqguvi .gt\_group\_heading {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## text-transform: inherit;  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## vertical-align: middle;  
## text-align: left;  
## }  
##   
## #fymosqguvi .gt\_empty\_group\_heading {  
## padding: 0.5px;  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## vertical-align: middle;  
## }  
##   
## #fymosqguvi .gt\_from\_md > :first-child {  
## margin-top: 0;  
## }  
##   
## #fymosqguvi .gt\_from\_md > :last-child {  
## margin-bottom: 0;  
## }  
##   
## #fymosqguvi .gt\_row {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## margin: 10px;  
## border-top-style: solid;  
## border-top-width: 1px;  
## border-top-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 1px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 1px;  
## border-right-color: #D3D3D3;  
## vertical-align: middle;  
## overflow-x: hidden;  
## }  
##   
## #fymosqguvi .gt\_stub {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## text-transform: inherit;  
## border-right-style: solid;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #fymosqguvi .gt\_stub\_row\_group {  
## color: #333333;  
## background-color: #FFFFFF;  
## font-size: 100%;  
## font-weight: initial;  
## text-transform: inherit;  
## border-right-style: solid;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## padding-left: 5px;  
## padding-right: 5px;  
## vertical-align: top;  
## }  
##   
## #fymosqguvi .gt\_row\_group\_first td {  
## border-top-width: 2px;  
## }  
##   
## #fymosqguvi .gt\_row\_group\_first th {  
## border-top-width: 2px;  
## }  
##   
## #fymosqguvi .gt\_summary\_row {  
## color: #333333;  
## background-color: #FFFFFF;  
## text-transform: inherit;  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #fymosqguvi .gt\_first\_summary\_row {  
## border-top-style: solid;  
## border-top-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_first\_summary\_row.thick {  
## border-top-width: 2px;  
## }  
##   
## #fymosqguvi .gt\_last\_summary\_row {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_grand\_summary\_row {  
## color: #333333;  
## background-color: #FFFFFF;  
## text-transform: inherit;  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #fymosqguvi .gt\_first\_grand\_summary\_row {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-top-style: double;  
## border-top-width: 6px;  
## border-top-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_last\_grand\_summary\_row\_top {  
## padding-top: 8px;  
## padding-bottom: 8px;  
## padding-left: 5px;  
## padding-right: 5px;  
## border-bottom-style: double;  
## border-bottom-width: 6px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_striped {  
## background-color: rgba(128, 128, 128, 0.05);  
## }  
##   
## #fymosqguvi .gt\_table\_body {  
## border-top-style: solid;  
## border-top-width: 2px;  
## border-top-color: #D3D3D3;  
## border-bottom-style: solid;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_footnotes {  
## color: #333333;  
## background-color: #FFFFFF;  
## border-bottom-style: none;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 2px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_footnote {  
## margin: 0px;  
## font-size: 90%;  
## padding-top: 4px;  
## padding-bottom: 4px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #fymosqguvi .gt\_sourcenotes {  
## color: #333333;  
## background-color: #FFFFFF;  
## border-bottom-style: none;  
## border-bottom-width: 2px;  
## border-bottom-color: #D3D3D3;  
## border-left-style: none;  
## border-left-width: 2px;  
## border-left-color: #D3D3D3;  
## border-right-style: none;  
## border-right-width: 2px;  
## border-right-color: #D3D3D3;  
## }  
##   
## #fymosqguvi .gt\_sourcenote {  
## font-size: 90%;  
## padding-top: 4px;  
## padding-bottom: 4px;  
## padding-left: 5px;  
## padding-right: 5px;  
## }  
##   
## #fymosqguvi .gt\_left {  
## text-align: left;  
## }  
##   
## #fymosqguvi .gt\_center {  
## text-align: center;  
## }  
##   
## #fymosqguvi .gt\_right {  
## text-align: right;  
## font-variant-numeric: tabular-nums;  
## }  
##   
## #fymosqguvi .gt\_font\_normal {  
## font-weight: normal;  
## }  
##   
## #fymosqguvi .gt\_font\_bold {  
## font-weight: bold;  
## }  
##   
## #fymosqguvi .gt\_font\_italic {  
## font-style: italic;  
## }  
##   
## #fymosqguvi .gt\_super {  
## font-size: 65%;  
## }  
##   
## #fymosqguvi .gt\_footnote\_marks {  
## font-size: 75%;  
## vertical-align: 0.4em;  
## position: initial;  
## }  
##   
## #fymosqguvi .gt\_asterisk {  
## font-size: 100%;  
## vertical-align: 0;  
## }  
##   
## #fymosqguvi .gt\_indent\_1 {  
## text-indent: 5px;  
## }  
##   
## #fymosqguvi .gt\_indent\_2 {  
## text-indent: 10px;  
## }  
##   
## #fymosqguvi .gt\_indent\_3 {  
## text-indent: 15px;  
## }  
##   
## #fymosqguvi .gt\_indent\_4 {  
## text-indent: 20px;  
## }  
##   
## #fymosqguvi .gt\_indent\_5 {  
## text-indent: 25px;  
## }  
##   
## #fymosqguvi .katex-display {  
## display: inline-flex !important;  
## margin-bottom: 0.75em !important;  
## }  
##   
## #fymosqguvi div.Reactable > div.rt-table > div.rt-thead > div.rt-tr.rt-tr-group-header > div.rt-th-group:after {  
## height: 0px !important;  
## }  
## </style>  
## <table class="gt\_table" data-quarto-disable-processing="false" data-quarto-bootstrap="false">  
## <thead>  
## <tr class="gt\_col\_headings">  
## <th class="gt\_col\_heading gt\_columns\_bottom\_border gt\_left" rowspan="1" colspan="1" scope="col" id="label"><span class='gt\_from\_md'>Variables</span></th>  
## <th class="gt\_col\_heading gt\_columns\_bottom\_border gt\_center" rowspan="1" colspan="1" scope="col" id="stat\_0"><span class='gt\_from\_md'><strong>N = 272,384</strong></span><span class="gt\_footnote\_marks" style="white-space:nowrap;font-style:italic;font-weight:normal;line-height:0;"><sup>1</sup></span></th>  
## </tr>  
## </thead>  
## <tbody class="gt\_table\_body">  
## <tr><td headers="label" class="gt\_row gt\_left">Energie (kcal) Baseline</td>  
## <td headers="stat\_0" class="gt\_row gt\_center">375 (328)</td></tr>  
## <tr><td headers="label" class="gt\_row gt\_left">Energie (kcal) Endline</td>  
## <td headers="stat\_0" class="gt\_row gt\_center">382 (348)</td></tr>  
## <tr><td headers="label" class="gt\_row gt\_left">Proteines (g) Baseline</td>  
## <td headers="stat\_0" class="gt\_row gt\_center">12 (17)</td></tr>  
## <tr><td headers="label" class="gt\_row gt\_left">Proteines (g) Endline</td>  
## <td headers="stat\_0" class="gt\_row gt\_center">12 (13)</td></tr>  
## <tr><td headers="label" class="gt\_row gt\_left">Lipides totaux (g) Baseline</td>  
## <td headers="stat\_0" class="gt\_row gt\_center">7 (14)</td></tr>  
## <tr><td headers="label" class="gt\_row gt\_left">Lipides totaux (g) Endline</td>  
## <td headers="stat\_0" class="gt\_row gt\_center">8 (15)</td></tr>  
## </tbody>  
##   
## <tfoot class="gt\_footnotes">  
## <tr>  
## <td class="gt\_footnote" colspan="2"><span class="gt\_footnote\_marks" style="white-space:nowrap;font-style:italic;font-weight:normal;line-height:0;"><sup>1</sup></span> <span class='gt\_from\_md'>Mean (SD)</span></td>  
## </tr>  
## </tfoot>  
## </table>  
## </div>