Modelos lineares aula 1

Danilo de Paula Santos

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```r
# install.packages("compareGroups")
# install.packages("ggplot2")
# install.packages("data.table")


library("compareGroups")
library("ggplot2")
library("haven")
```

Estuda da relação entre infecção por acilóstomo e perda de sangue. Tailândia 1970

```r
suwit <- read_sav("C:/Users/00265021/Documents/Cadeiras/Modelos lineares/Suwit.sav")
```

```r
compare_suwit <- compareGroups( ~ ., data = suwit)

summary(compare_suwit)
```

```
##
##  --- Descriptives of each row-variable ---
##
## -------------------
## row-variable: Identificação
##
##        N  mean sd       lower    upper
## [ALL] 15 8     4.472136 5.523414 10.47659
##
## -------------------
## row-variable: número de vermes
##
##        N  mean  sd        lower    upper
## [ALL] 15 552.4 513.9007 267.8113 836.9887
##
## -------------------
## row-variable: Perda de sangue por dia
##
##        N  mean     sd       lower    upper
## [ALL] 15 33.45267 24.85249 19.68982 47.21551
```

```r
tabela_suwit <- createTable(compare_suwit)
```

Estudo Fat_dat "Fitting Percentage of Body Fat to Simple Body Measurements"

```r
fat_dat <- read_sav("C:/Users/00265021/Documents/Cadeiras/Modelos lineares/fat_dat.sav")
```

Corrigindo os erros de digitação:

- The body densities for cases 48, 76, and 96, for instance, each seem to have one digit in error as can be seen from the two body fat percentage values.
- Case 42) over 200 pounds in weight who is less than 3 feet tall (the height should presumably be 69.5 inches, not 29.5 inches)!
- The percent body fat estimates are truncated to zero when negative (case 182)

```r
# Altura

fat_dat$altura_pol <- ifelse( fat_dat$numero == 42, 69.5, fat_dat$altura_pol)

# Densidades

fat_dat$densidade <- ifelse( fat_dat$numero == 48, 1.0865, fat_dat$densidade)
fat_dat$densidade <- ifelse( fat_dat$numero == 76, 1.0566, fat_dat$densidade)
fat_dat$densidade <- ifelse( fat_dat$numero == 96, 1.0591, fat_dat$densidade)
```

```r
compare_fat <- compareGroups( ~ ., data = fat_dat)

summary(compare_fat)
```

```
##
##  --- Descriptives of each row-variable ---
##
## -------------------
## row-variable: numero
##
##        N   mean  sd        lower     upper
## [ALL] 252 126.5 72.89033 117.4569 135.5431
##
## -------------------
## row-variable: fat_Brozek
##
##        N   mean     sd       lower     upper
## [ALL] 252 18.93849 7.750856 17.97689 19.9001
##
## -------------------
## row-variable: fat_Siri
##
##        N   mean     sd       lower     upper
## [ALL] 252 19.15079 8.36874 18.11253 20.18906
##
## -------------------
## row-variable: densidade
##
```

```
##          N       mean        sd         lower      upper
## [ALL]  252   1.055455  0.018909   1.053109   1.057801
##
## -------------------
## row-variable: idade
##
##          N       mean        sd         lower      upper
## [ALL]  252   44.88492  12.60204   43.32146   46.44838
##
## -------------------
## row-variable: Peso em libras
##
##          N       mean        sd         lower      upper
## [ALL]  252   178.9244  29.38916   175.2783   182.5706
##
## -------------------
## row-variable: altura_pol
##
##          N       mean        sd         lower      upper
## [ALL]  252   70.30754  2.609583   69.98378   70.6313
##
## -------------------
## row-variable: kg/m2
##
##          N       mean        sd         lower      upper
## [ALL]  252   25.4369   3.648111   24.9843    25.88951
##
## -------------------
## row-variable: peso da massa magra
##
##          N       mean        sd         lower      upper
## [ALL]  252   143.7139  18.23164   141.452    145.9758
##
## -------------------
## row-variable: Circunferencia do pescoço
##
##          N       mean        sd         lower      upper
## [ALL]  252   37.99206  2.430913   37.69047   38.29365
##
## -------------------
## row-variable: Circunferencia do peito
##
##          N       mean        sd         lower      upper
## [ALL]  252   100.8242  8.430476   99.77829   101.8701
##
## -------------------
## row-variable: Circ do abdomem
##
##          N       mean        sd         lower      upper
## [ALL]  252   92.55595  10.78308   91.21816   93.89375
##
## -------------------
## row-variable: circ do quadril
##
```