07_prueba_p_una_muestra_correlacion.R

Usuario

2023-11-30

```
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# Importar datos
library(repmis)
DAP <-
source_data("https://www.dropbox.com/s/fbrwxypacjgeayj/Datos_Rascon_Anova
.csv?dl=1"
)
```
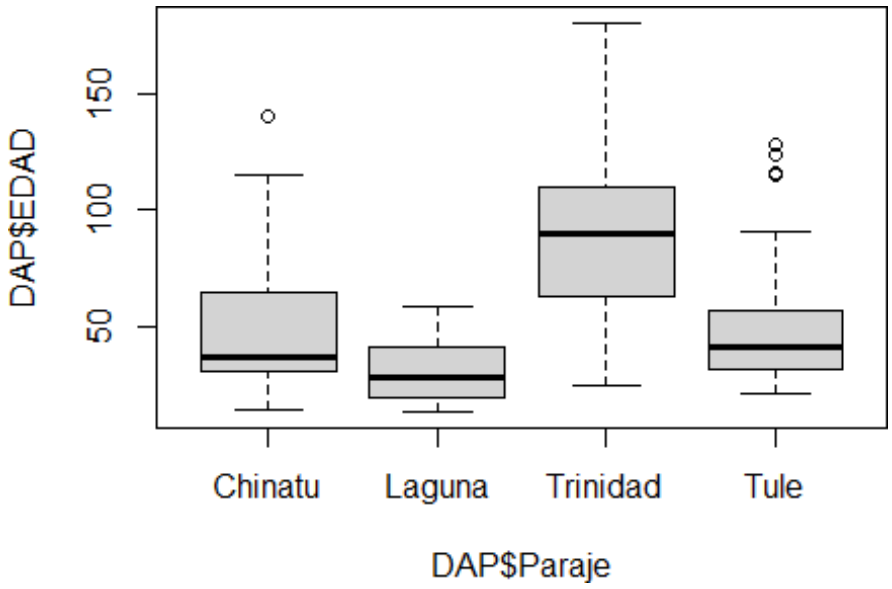
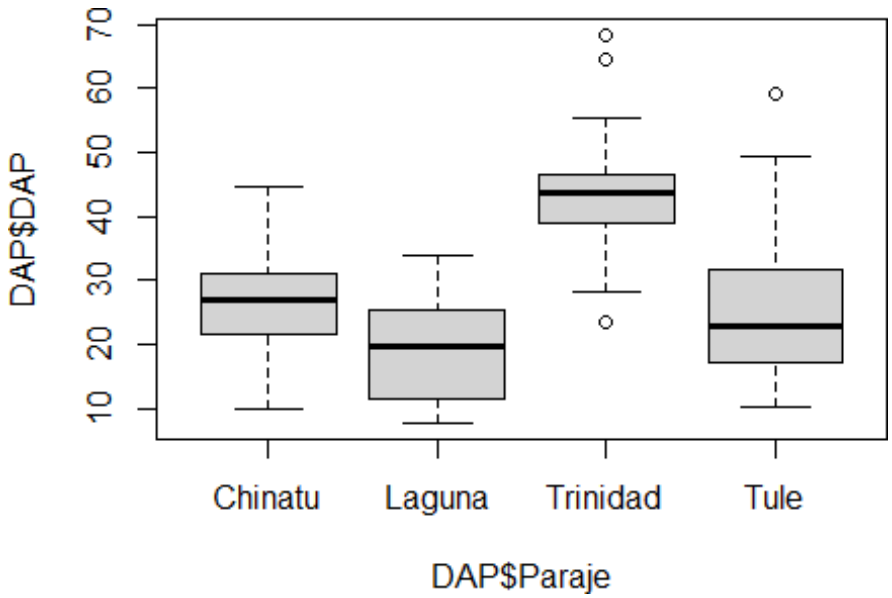

```
## Downloading data from:
https://www.dropbox.com/s/fbrwxypacjgeayj/Datos_Rascon_Anova.csv?dl=1
```

```
## SHA-1 hash of the downloaded data file is:
## 75a7b481bb1b844f43090d2711189c46afece8fa
```

```
 DAP$Paraje <- as.factor(DAP$Paraje)
 DAP$sP <- as.factor(DAP$SP)



 # Determinar estadisticas descriptivas



 boxplot(DAP$EDAD ~ DAP$Paraje)
```

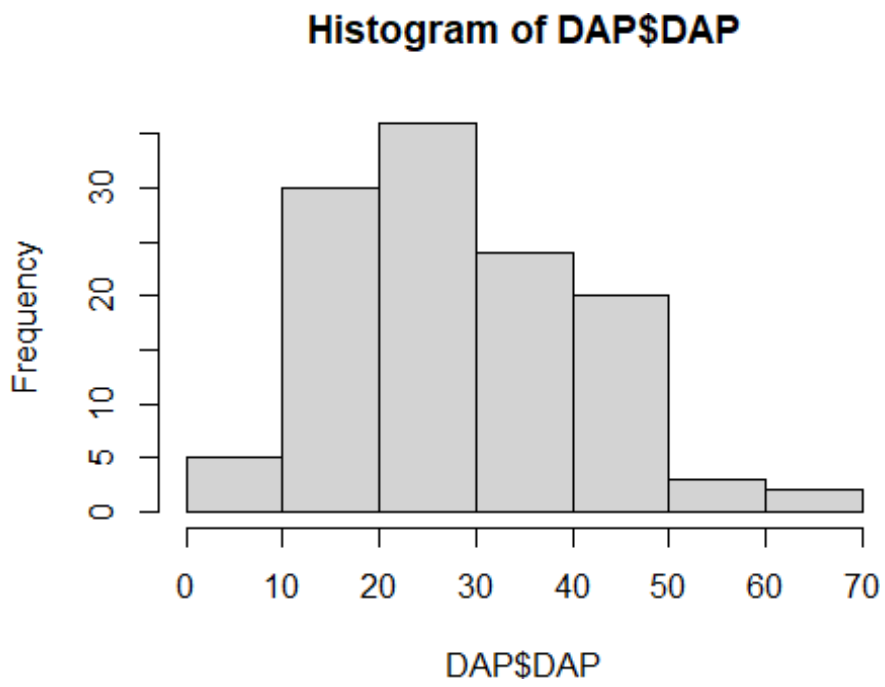



```
boxplot(DAP$DAP ~ DAP$Paraje)
```




```
 tapply(DAP$EDAD, DAP$Paraje, mean) # Chinatu    Laguna   Trinidad
Tule
```

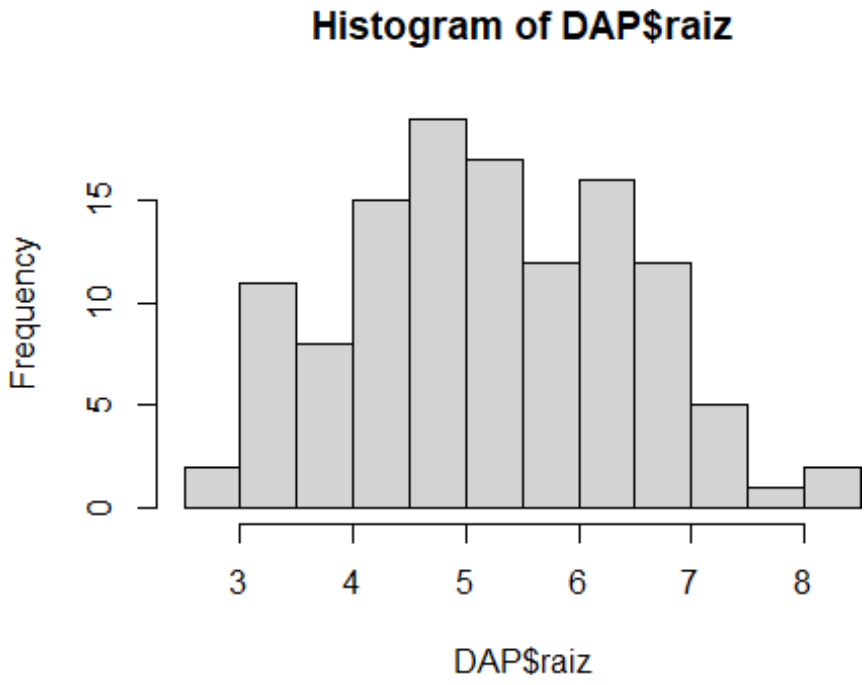
```
##  Chinatu   Laguna Trinidad     Tule
## 48.70000 30.70000 93.40000 53.13333

                                    #48.70000  30.70000  93.40000
53.13333
 tapply(DAP$EDAD, DAP$Paraje, var)    # Chinatu    Laguna   Trinidad
Tule

##   Chinatu    Laguna  Trinidad      Tule
##  837.3207  150.4931 1427.4897  998.2575

                                     # 837.3207  150.4931 1427.4897
998.2575
 # Normalidad
 shapiro.test(DAP$DAP) # W = 0.96548, p-value = 0.003575, NO SON NORMALES

##
##  Shapiro-Wilk normality test
##
## data:  DAP$DAP
## W = 0.96548, p-value = 0.003575

 hist(DAP$DAP)
```




```
 bartlett.test(DAP$DAP ~ DAP$Paraje) # Bartlett's K-squared = 6.6622, df
= 3, p-value = 0.08348
```

```
##
##  Bartlett test of homogeneity of variances
##
## data:  DAP$DAP by DAP$Paraje
## Bartlett's K-squared = 6.6622, df = 3, p-value = 0.08348
```

```
# Transformar DAP para cumplir normalidad
 DAP$raiz <- sqrt (DAP$DAP)
 hist(DAP$raiz)
```



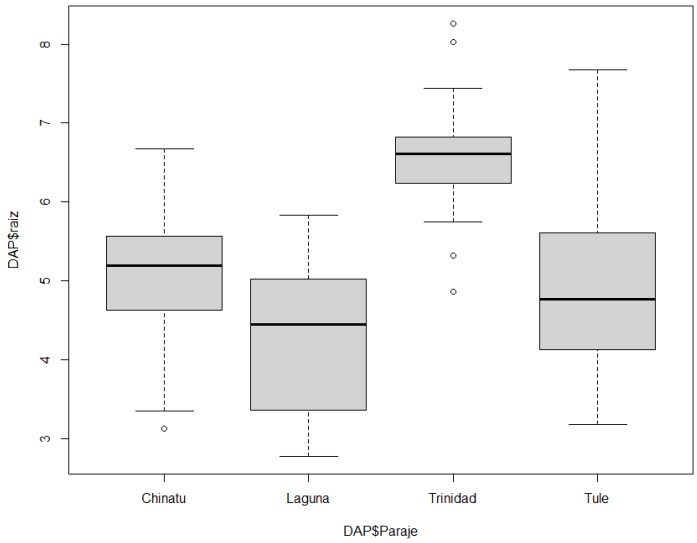

```
 # Probar normalidad a los datos transformados (Raiz cuadrada)
 shapiro.test(DAP$raiz) # W = 0.98341, p-value = 0.1473
```

```
##
##  Shapiro-Wilk normality test
##
## data:  DAP$raiz
## W = 0.98341, p-value = 0.1473
```

```
 # Probar homogeneidad de varianzas de los datos transforados
 bartlett.test(DAP$raiz ~ DAP$Paraje)
```

```
##
##  Bartlett test of homogeneity of variances
##
## data:  DAP$raiz by DAP$Paraje
## Bartlett's K-squared = 7.6911, df = 3, p-value = 0.05285
```

```
# Bartlett's K-squared = 7.6911, df = 3, p-value = 0.05285

dap.aov <- aov

dap.aov <- aov(DAP$raiz ~ DAP$Paraje)
              # Df Sum Sq Mean Sq F value   Pr(>F)
 # DAP$Paraje    3  84.09  28.029    33.2 1.45e-15 ***
  # Residuals   116  97.94   0.844
summary (dap.aov)

##              Df Sum Sq Mean Sq F value   Pr(>F)
## DAP$Paraje    3  84.09  28.029    33.2 1.45e-15 ***
## Residuals   116  97.94   0.844
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

# Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
boxplot(DAP$raiz ~ DAP$Paraje,
        col = "pink")
```




```
# 84.09/3: 28.03
# 97.94/116: 0.8443103
# 28.029/0.844: 33.20972


# Encontrar las diferencias significativas
```

```
TukeyHSD(dap.aov)
```

```
##   Tukey multiple comparisons of means
##     95% family-wise confidence level
##
## Fit: aov(formula = DAP$raiz ~ DAP$Paraje)
##
## $`DAP$Paraje`
##                         diff          lwr        upr     p adj
## Laguna-Chinatu    -0.7331899 -1.351610796 -0.1147691 0.0131794
## Trinidad-Chinatu   1.5391985  0.920777631  2.1576194 0.0000000
## Tule-Chinatu      -0.1190328 -0.737453617  0.4993881 0.9585122
## Trinidad-Laguna    2.2723884  1.653967564  2.8908093 0.0000000
## Tule-Laguna        0.6141572 -0.004263685  1.2325780 0.0523230
## Tule-Trinidad     -1.6582312 -2.276652111 -1.0398104 0.0000000
```

```
                    # diff          lwr        upr     p adj
# Laguna-Chinatu    -0.7331899 -1.351610796 -0.1147691 0.0131794
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# Tule-Chinatu      -0.1190328 -0.737453617  0.4993881 0.9585122
# Trinidad-Laguna    2.2723884  1.653967564  2.8908093 0.0000000
# Tule-Laguna        0.6141572 -0.004263685  1.2325780 0.0523230
# Tule-Trinidad     -1.6582312 -2.276652111 -1.0398104 0.0000000
```

```
plot(TukeyHSD(dap.aov))
```