

07_prueba_p_una_muestra_correlacion.R

Usuario

2023-11-30

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

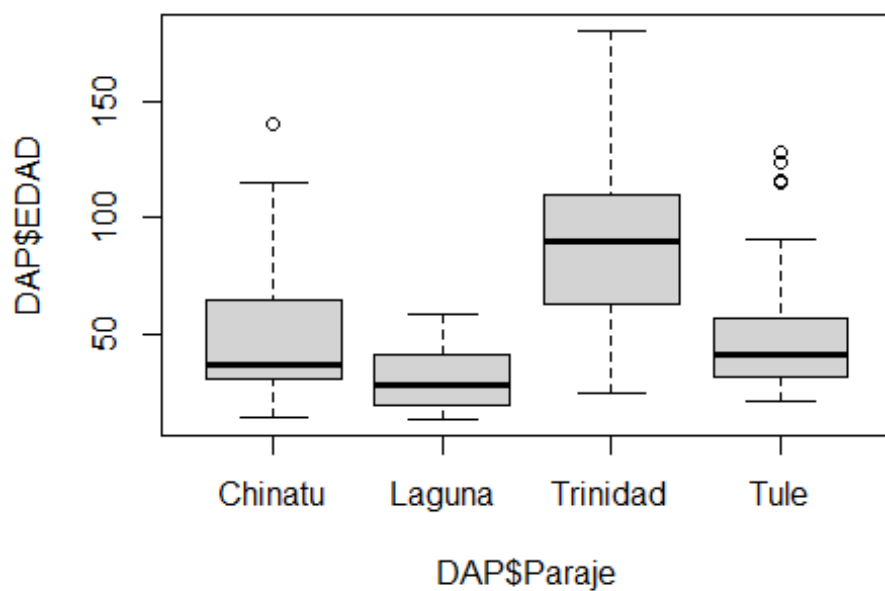
## Downloading data from:
https://www.dropbox.com/s/fbrwxypacjgeayj/Datos_Rascon_Anova.csv?dl=1

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

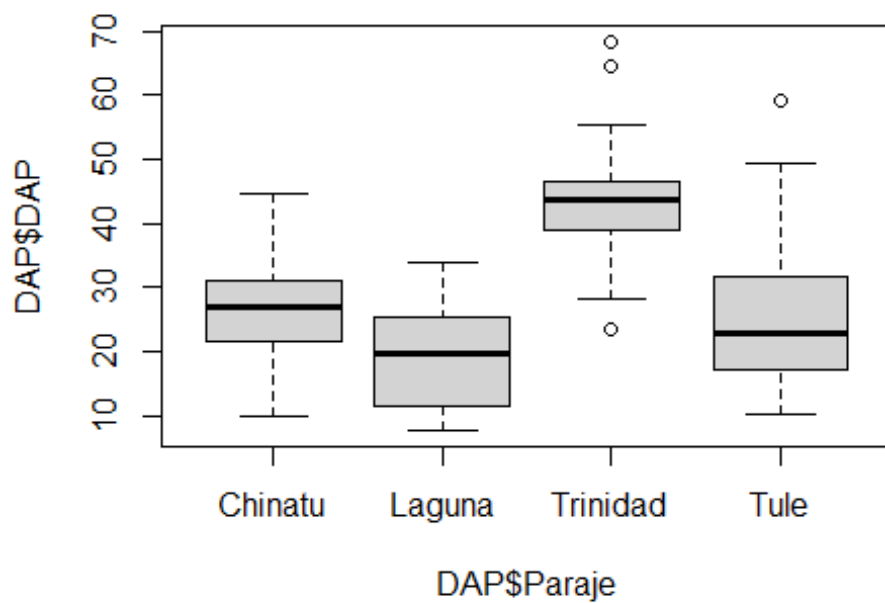
DAP$Paraje <- as.factor(DAP$Paraje)
DAP$sP <- as.factor(DAP$sP)

# Determinar estadísticas 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

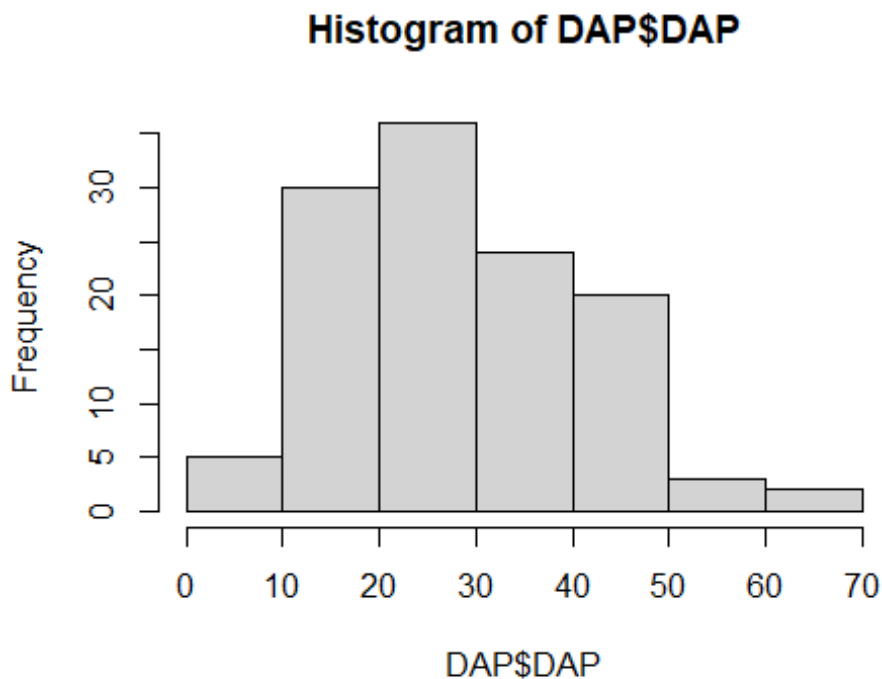
#48.70000 30.70000 93.40000
53.13333
tapply(DAP$EDAD, DAP$Paraje, var) # Chinatu Laguna Trinidad
Tule

## 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

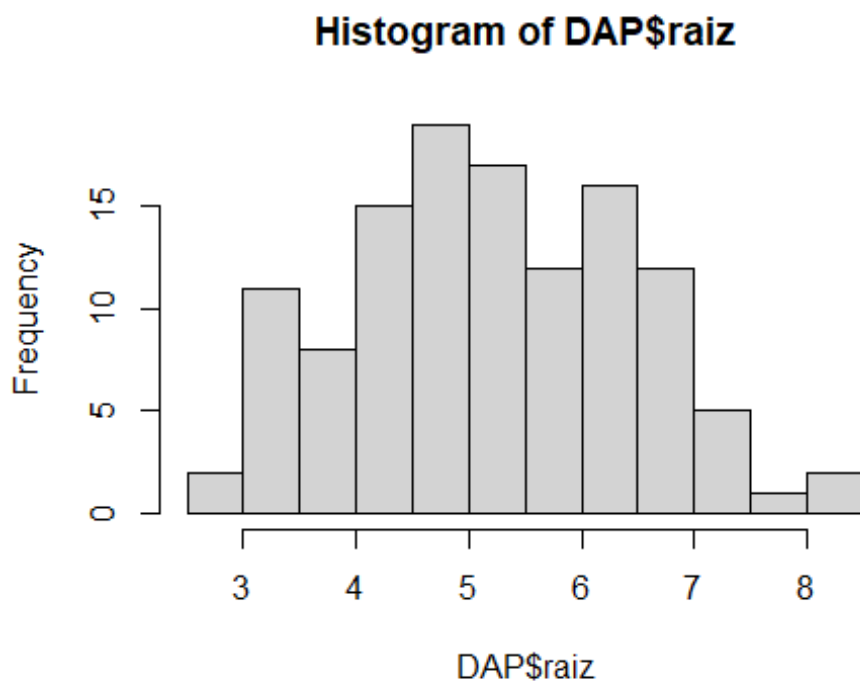
hist(DAP$DAP)
```



```
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

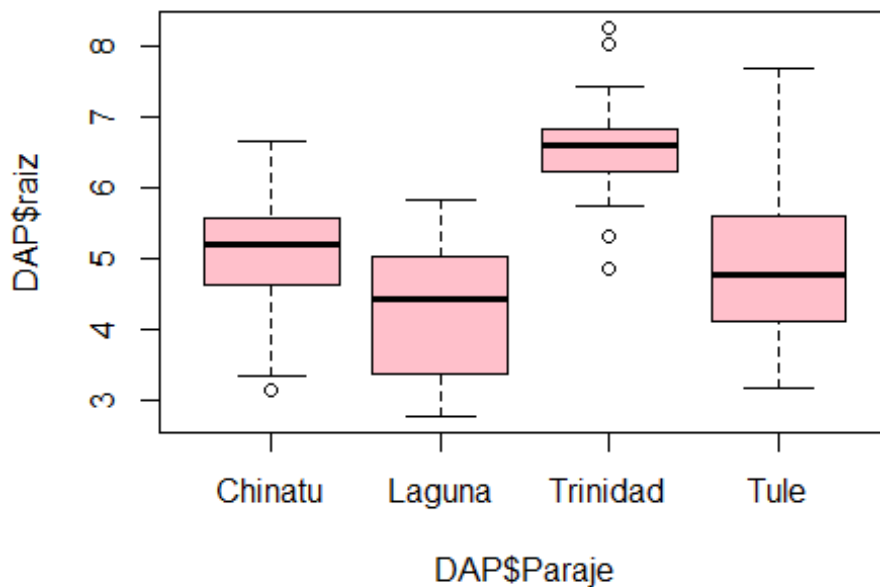
dap.aov <- aov

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

95% family-wise confidence level

