report

G, Tenacidad, Perfeccionismo: Group Differnces and Correlation Analyses.

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DIFFERENCES AMONG GROUPS

ANOVAS FOR CATEGORICAL INFORMATION

1. INCLUDING CAPACITY.
2. Analyses of influence of categorical variables, groups, to G Tenaci and Perfec.

```
## COMPUTE ANALYSES AND GRAPHICS
categorical_results <- merged_lm_responses_to_predictors(scores_grit_esfuer_preoc, categorical_info, th
side = 1, cex = 0.5, pch = 1.1, alpha = 1/3, size = 1.1)
```

```
## $fG
## $fG$escuela
##        xcepac xprimcongreso   xsecaugusto
##  8.453539e-16  6.966841e-03  1.962082e-07
##
## $fG$grado
##         x1b          x2a          x3a          x3b           x6           x8
## 0.002125176 0.002636762 0.001098538 0.004825131 0.034494787 0.037487880
##          x9
## 0.046386617
##
## $fG$ciudad
##         xcdmx xguadalajara
## 6.772918e-11 9.875281e-36
##
## $fG$capacidad
## [1] 2.005137e-17
##
##
## $Tenaci
## $Tenaci$escuela
## xprimcongreso
##   0.006709368
##
## $Tenaci$grado
##         x6a          x6c
## 0.009994055 0.003121953
##
## $Tenaci$ciudad
##        xcdmx
```
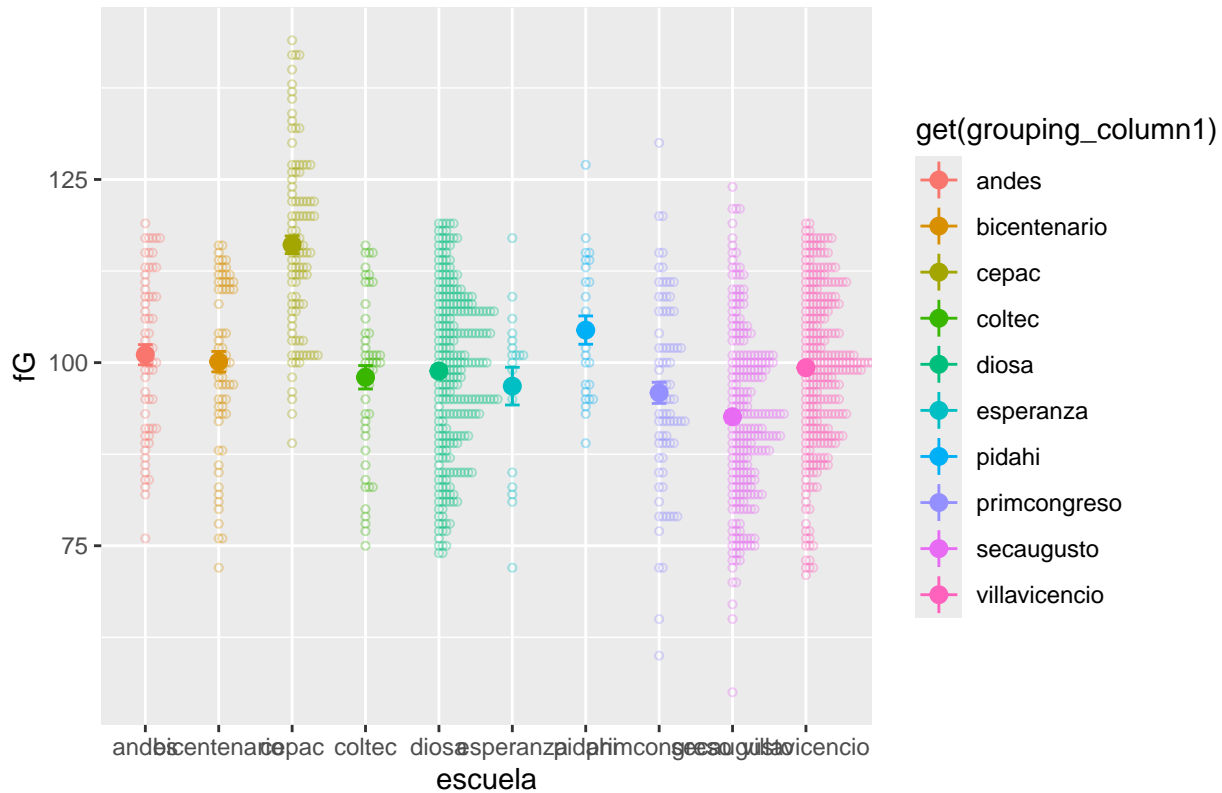
```
## 0.001419448
##
## $Tenaci$nacionalidad
##    xmexicano
## 0.006650907
##
## $Tenaci$capacidad
## [1] 0.04793674
##
##
## $Esfuer
## $Esfuer$escuela
## xprimcongreso
##    0.04431305
##
## $Esfuer$grado
##         x1d         x2b         x2c         x3a         x6a         x6c
## 0.044021673 0.002543359 0.001648638 0.027042924 0.012576949 0.030856235
##
## $Esfuer$ciudad
##       xcdmx xguadalajara
##  0.003100297  0.008215657
##
## $Esfuer$nacionalidad
##    xmexicano
## 0.003205683
##
##
## $Preocu
## $Preocu$escuela
##      xcepac
## 0.004002426
##
## $Preocu$grado
##         x2c
## 0.003962269
##
## $Preocu$ciudad
## xguadalajara
## 2.899829e-05
##
## $Preocu$nacionalidad
##    xmexicano
## 0.0002189558
##
##
## [1] "fG escuela"
## [1] "fG grado"
## [1] "fG ciudad"
## [1] "fG capacidad"
## [1] "Tenaci escuela"
## [1] "Tenaci grado"
## [1] "Tenaci ciudad"
## [1] "Tenaci nacionalidad"
```
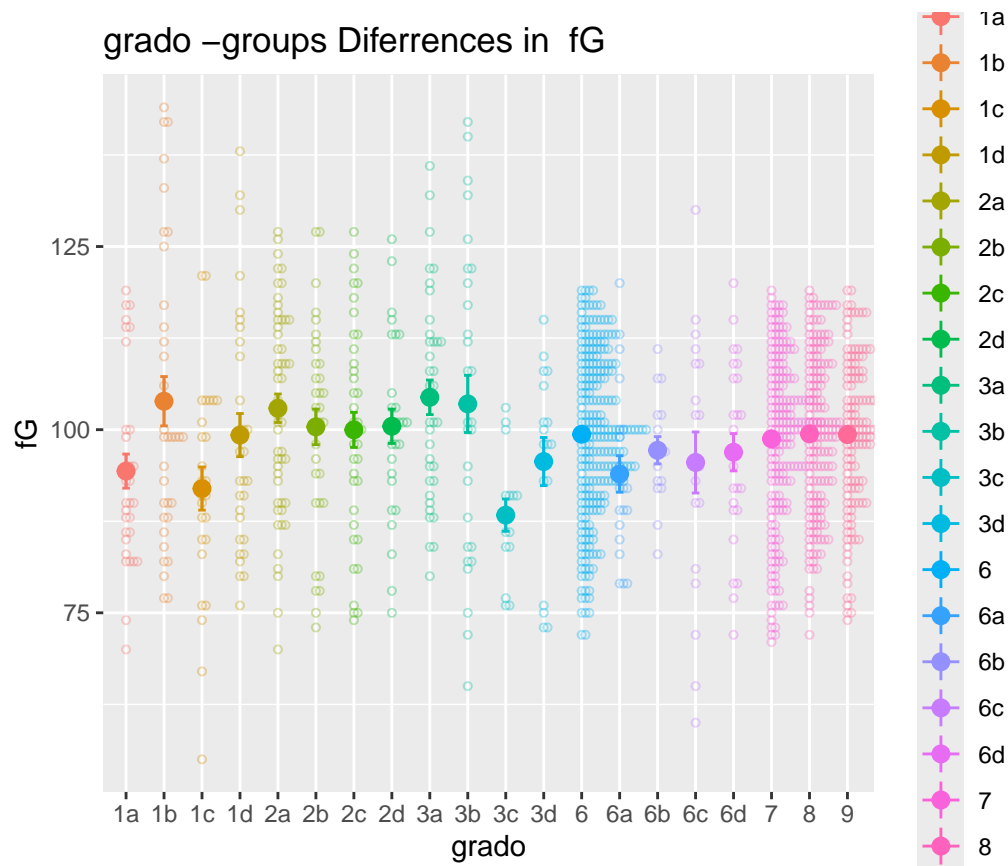
```
## [1] "Tenaci capacidad"
## [1] "Esfuer escuela"
## [1] "Esfuer grado"
## [1] "Esfuer ciudad"
## [1] "Esfuer nacionalidad"
## [1] "Preocu escuela"
## [1] "Preocu grado"
## [1] "Preocu ciudad"
## [1] "Preocu nacionalidad"
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```
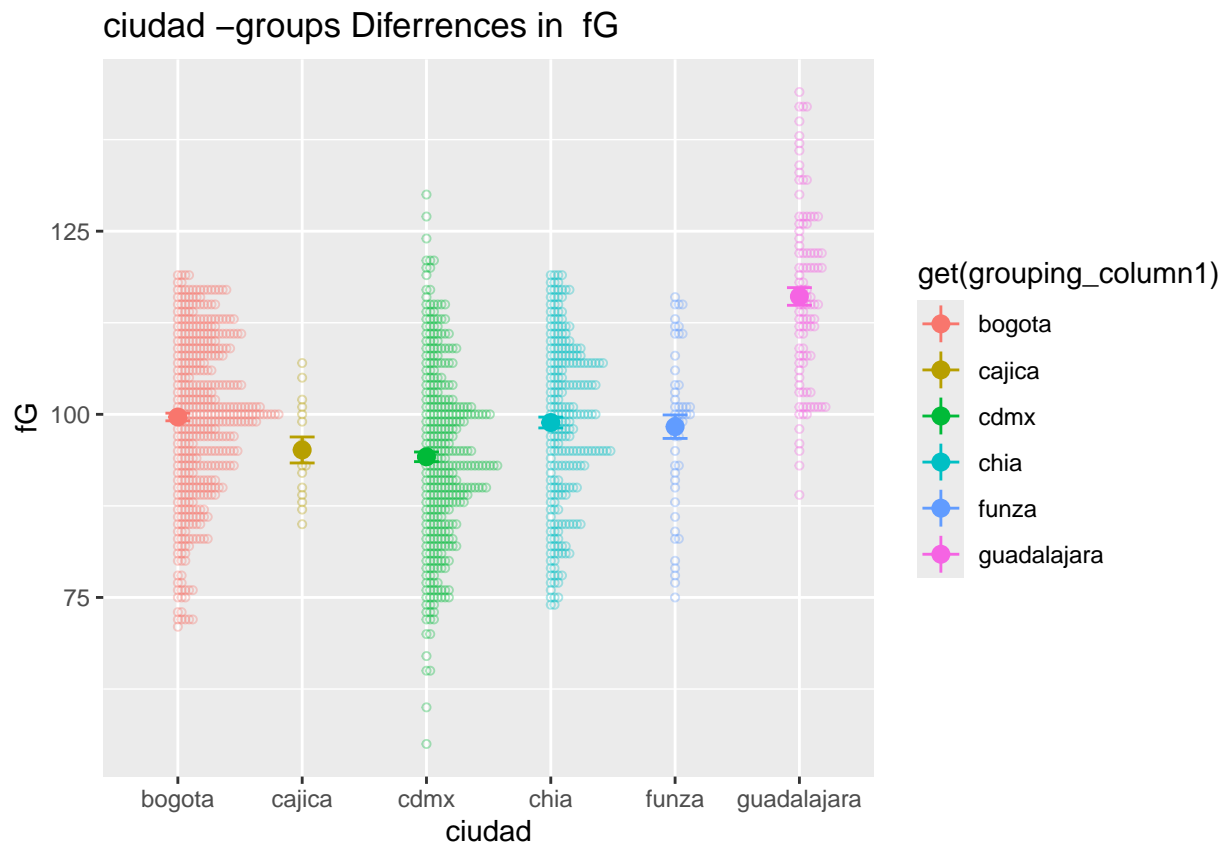

escuela –groups Diferrences in fG
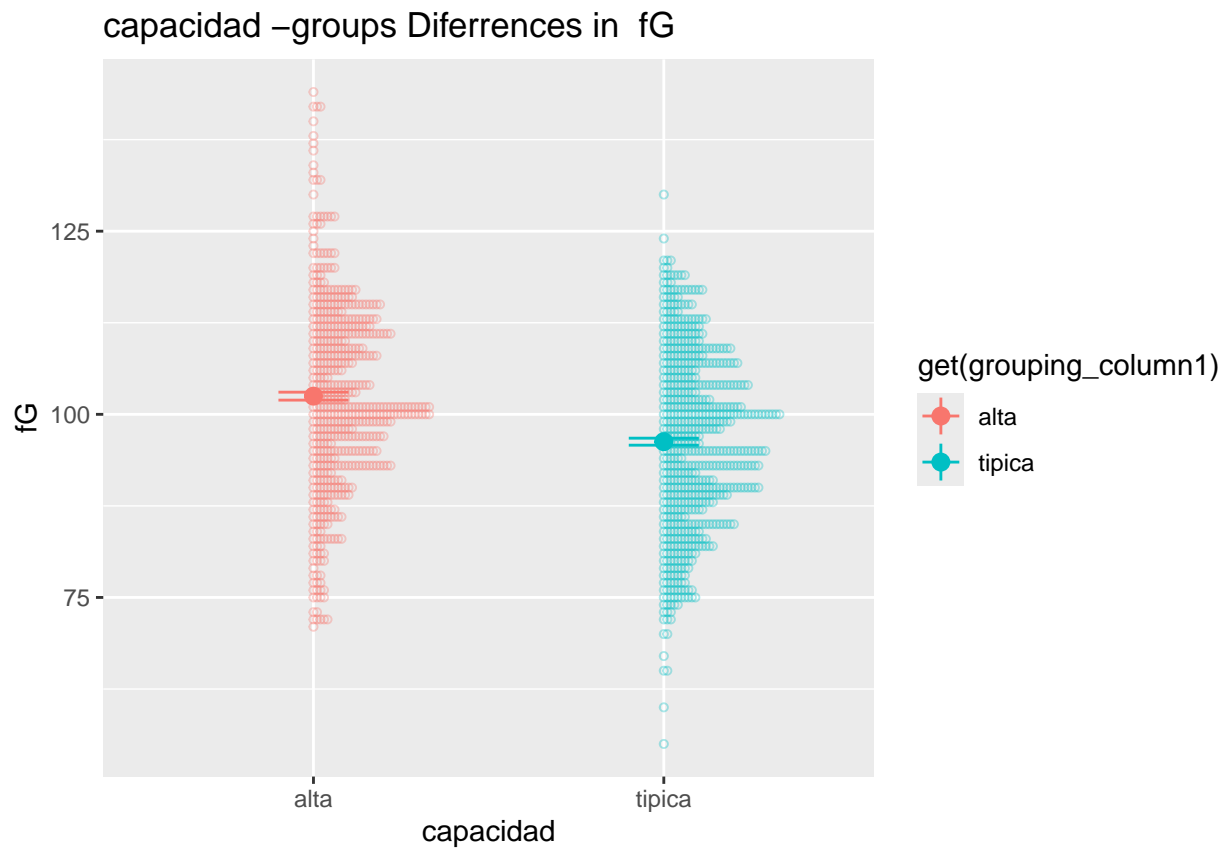
```
## [1] "=== DESCRIPTIVE STATS OF fG IN escuela GROUPS ==="
## # A tibble: 10 x 4
##    escuela        mean    sd   num
##    <fct>         <dbl> <dbl> <int>
##  1 andes          101.  10.9    63
##  2 bicentenario   100.  11.4    67
##  3 cepac          116.  12.1   101
##  4 coltec          98   11.2    49
##  5 diosa          98.9  11.3   265
##  6 esperanza      96.8  11.2    19
##  7 pidahi         104.   9.67    25
##  8 primcongreso   95.9  12.9    81
##  9 secaugusto     92.6  11.9   247
## 10 villavicencio  99.3  10.8   285
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

grado –groups Diferrences in fG
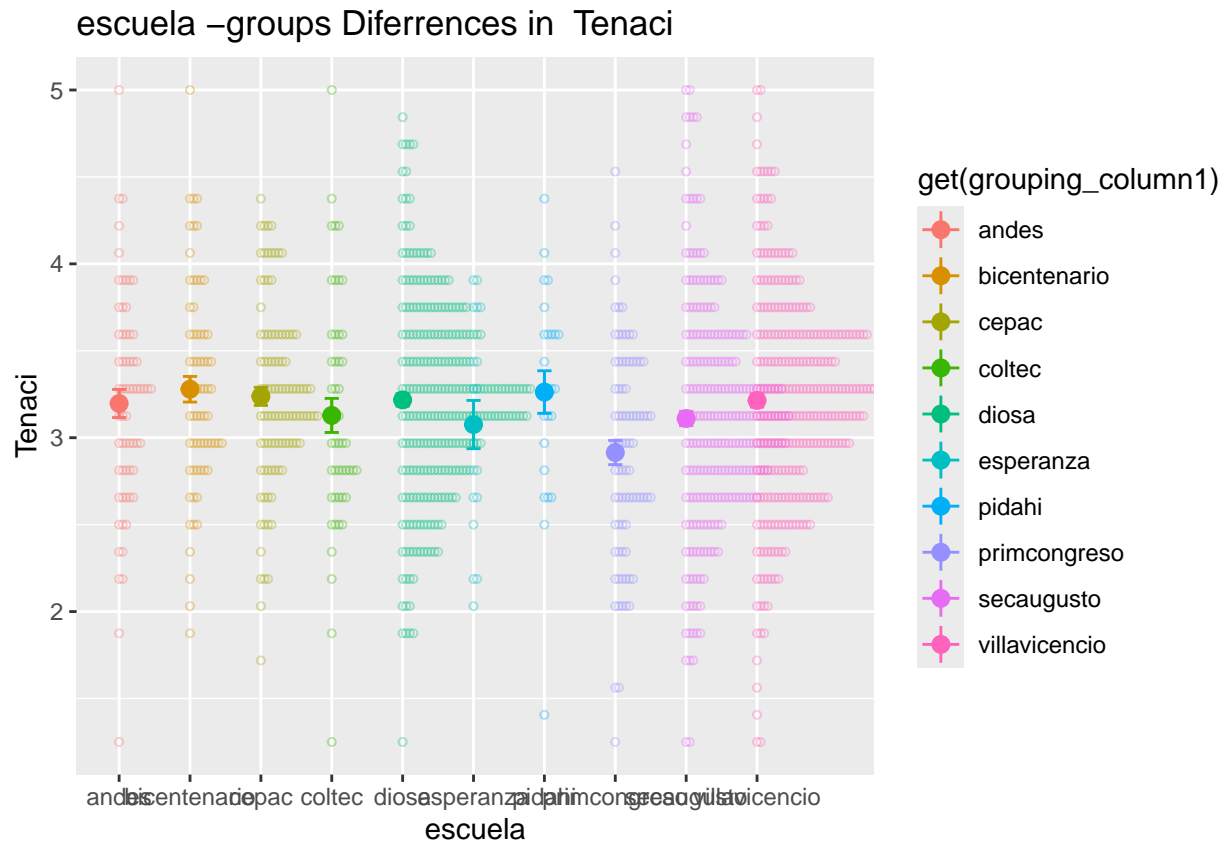
```
## [1] "=== DESCRIPTIVE STATS OF fG IN grado GROUPS ==="
## # A tibble: 20 x 4
##    grado  mean    sd   num
##    <fct> <dbl> <dbl> <int>
##  1 1a     94.3  13.2    32
##  2 1b    104.   19.9    35
##  3 1c     92.0  15.0    26
##  4 1d     99.3  16.4    31
##  5 2a    103.   14.0    52
##  6 2b    100.   14.2    34
##  7 2c    100.   14.7    38
##  8 2d    100.   12.4    28
##  9 3a    104.   14.2    36
## 10 3b    104.   21.0    29
## 11 3c     88.3  8.54    15
## 12 3d     95.6  13.6    17
## 13 6      99.4  11.1   252
## 14 6a     94.0  11.4    21
## 15 6b     97.2  7.47    16
## 16 6c     95.5  18.2    19
## 17 6d     96.9  12.7    25
## 18 7      98.7  11.6   195
## 19 8      99.4  10.9   172
## 20 9      99.3  10.7   129
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

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ciudad –groups Diferrences in fG

```
## [1] "=== DESCRIPTIVE STATS OF fG IN ciudad GROUPS ==="
## # A tibble: 6 x 4
##   ciudad       mean     sd    num
##   <fct>       <dbl>  <dbl>  <int>
## 1 bogota       99.6   11.0    443
## 2 cajica       95.1   6.88     15
## 3 cdmx         94.2   12.4    353
## 4 chia         98.9   11.5    242
## 5 funza        98.3   11.1     48
## 6 guadalajara 116.    12.1    101
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```
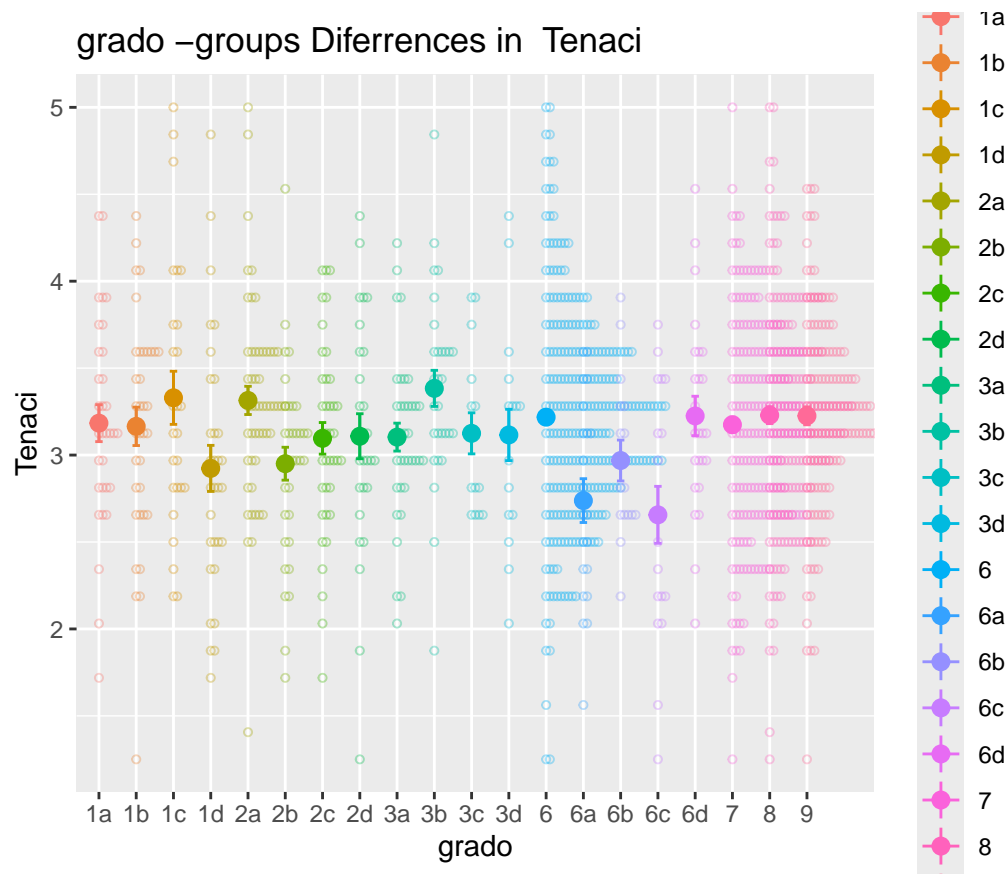
capacidad –groups Diferrences in fG
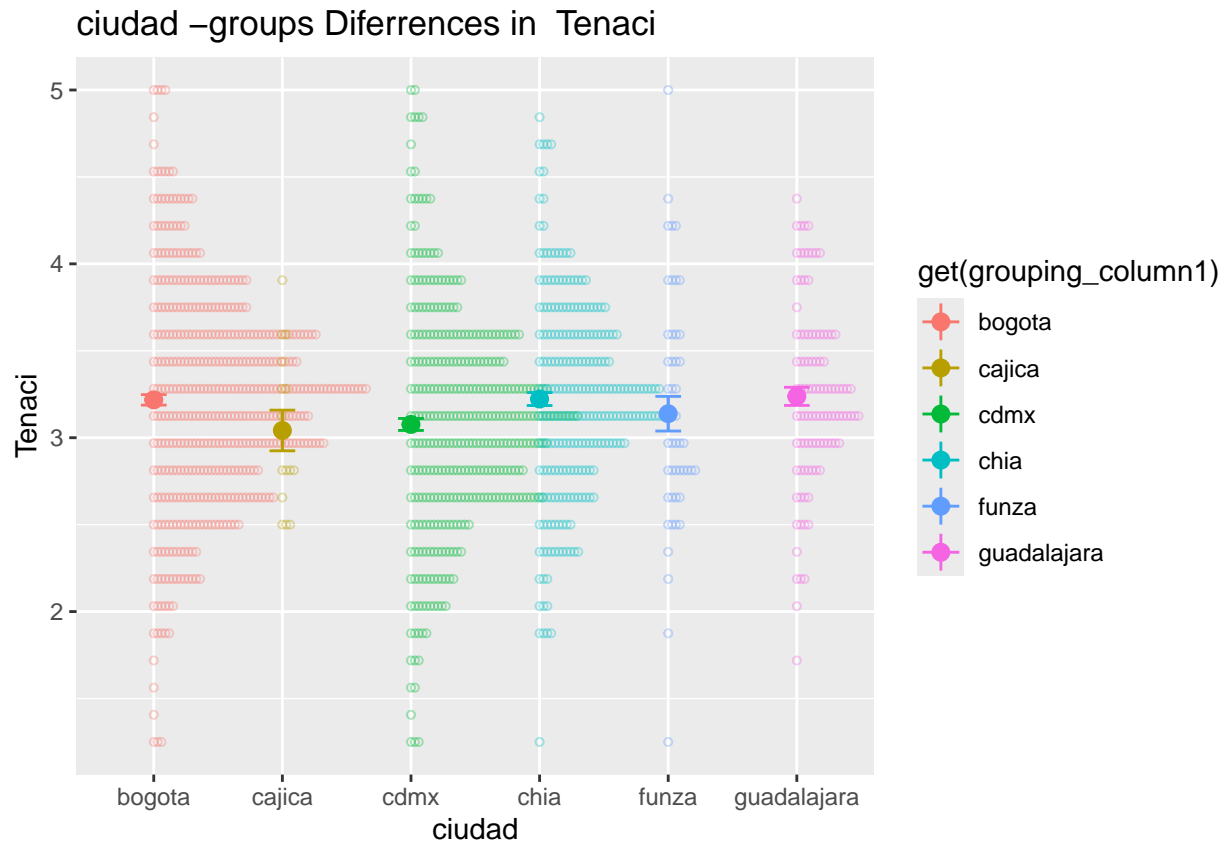
```
## [1] "=== DESCRIPTIVE STATS OF fG IN capacidad GROUPS ==="
## # A tibble: 2 x 4
##   capacidad  mean    sd   num
##   <fct>     <dbl> <dbl> <int>
## 1 alta       102.  12.8   560
## 2 tipica    96.3  12.1   642
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

escuela –groups Diferrences in Tenaci
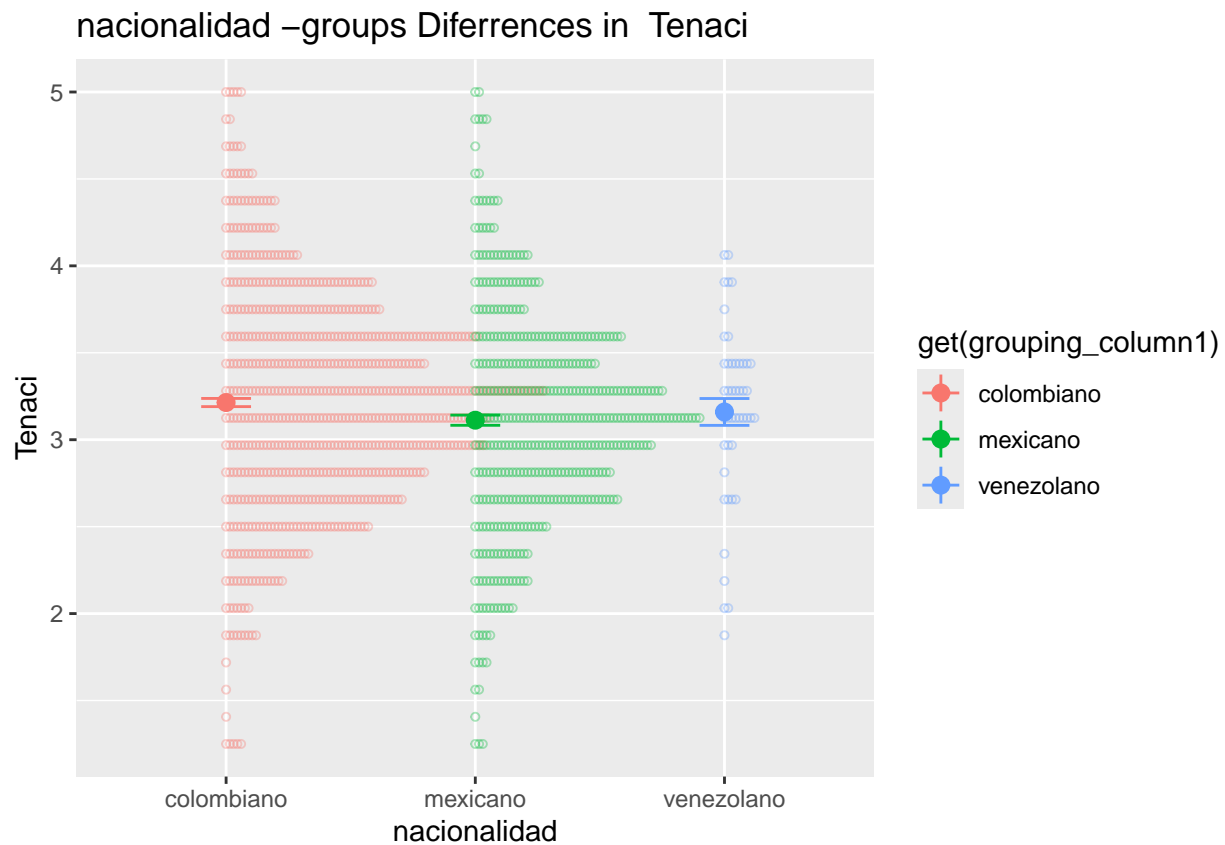


```
## [1] "=== DESCRIPTIVE STATS OF Tenaci IN escuela GROUPS ==="
## # A tibble: 10 x 4
##    escuela        mean    sd   num
##    <fct>         <dbl> <dbl> <int>
##  1 andes          3.20 0.642    63
##  2 bicentenario   3.28 0.603    67
##  3 cepac          3.24 0.524   101
##  4 coltec         3.13 0.686    49
##  5 diosa          3.22 0.580   265
##  6 esperanza      3.08 0.605    19
##  7 pidahi         3.26 0.612    25
##  8 primcongreso   2.91 0.625    81
##  9 secaugusto     3.11 0.650   247
## 10 villavicencio  3.21 0.642   285
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

grado –groups Diferrences in Tenaci
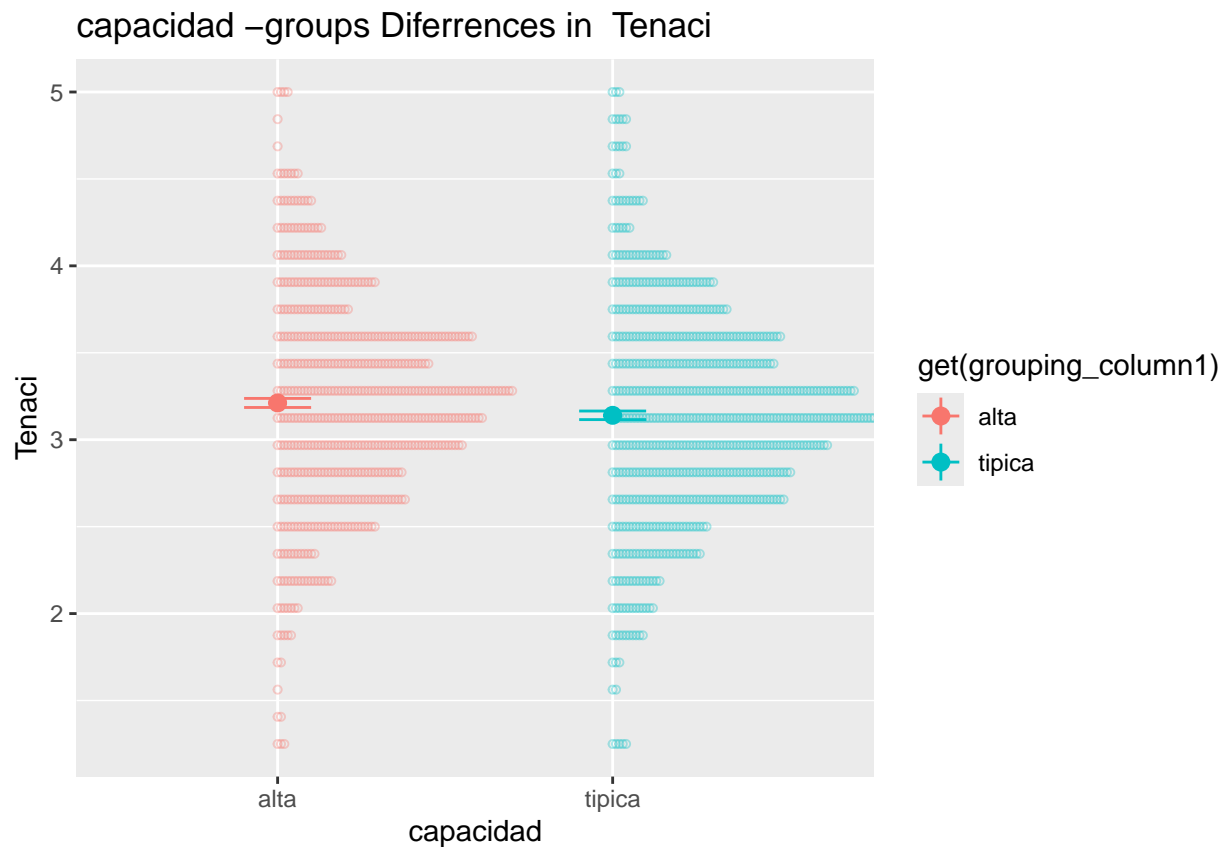
```
## [1] "=== DESCRIPTIVE STATS OF Tenaci IN grado GROUPS ==="
## # A tibble: 20 x 4
##     grado  mean    sd   num
##     <fct> <dbl> <dbl> <int>
##  1 1a      3.18 0.602    32
##  2 1b      3.17 0.653    35
##  3 1c      3.33 0.779    26
##  4 1d      2.92 0.738    31
##  5 2a      3.31 0.586    52
##  6 2b      2.95 0.552    34
##  7 2c      3.10 0.560    38
##  8 2d      3.11 0.685    28
##  9 3a      3.10 0.481    36
## 10 3b      3.38 0.559    29
## 11 3c      3.12 0.457    15
## 12 3d      3.12 0.609    17
## 13 6       3.22 0.634   252
## 14 6a      2.74 0.578    21
## 15 6b      2.97 0.470    16
## 16 6c      2.66 0.714    19
## 17 6d      3.22 0.567    25
## 18 7       3.17 0.605   195
## 19 8       3.23 0.637   172
## 20 9       3.23 0.585   129
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

ciudad −groups Diferrences in Tenaci
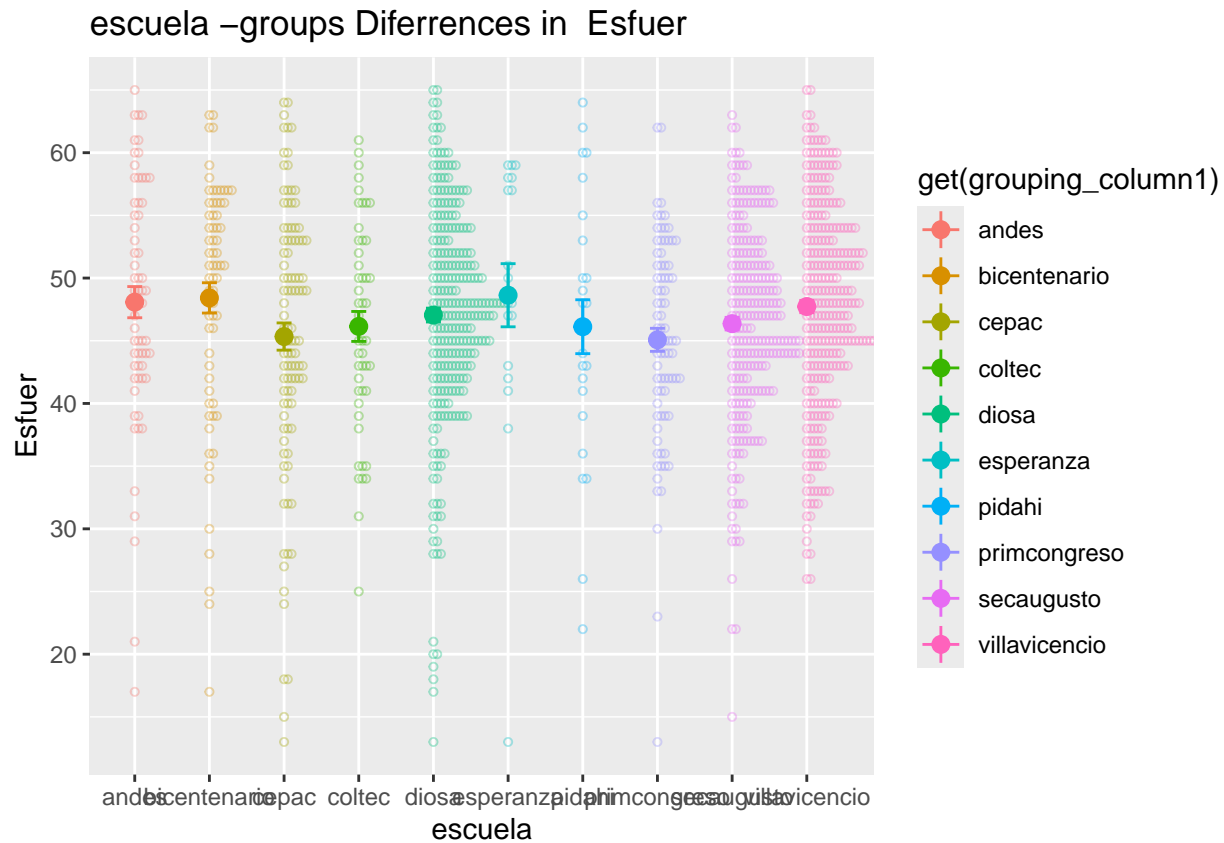


```
## [1] "=== DESCRIPTIVE STATS OF Tenaci IN ciudad GROUPS ==="
## # A tibble: 6 x 4
##   ciudad        mean    sd    num
##   <fct>        <dbl> <dbl> <int>
## 1 bogota        3.22 0.635    443
## 2 cajica        3.04 0.453     15
## 3 cdmx          3.08 0.647    353
## 4 chia          3.22 0.582    242
## 5 funza         3.14 0.690     48
## 6 guadalajara   3.24 0.524    101
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

nacionalidad –groups Diferrences in Tenaci
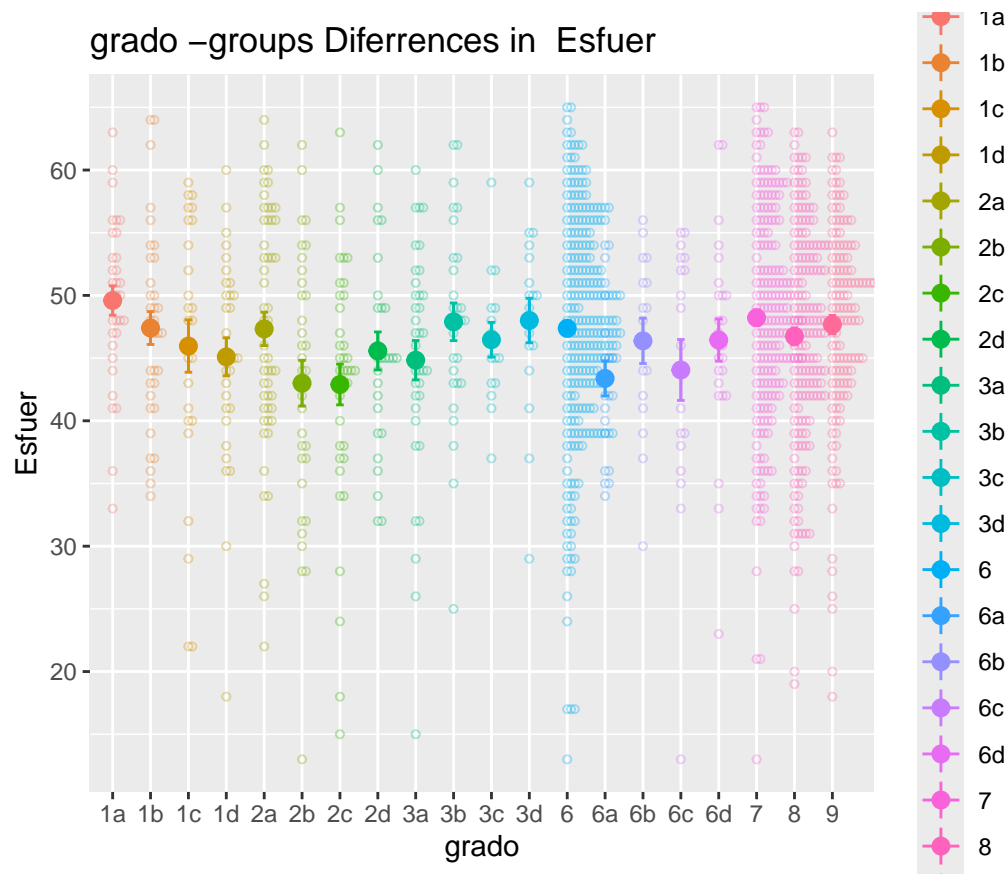
```
## [1] "=== DESCRIPTIVE STATS OF Tenaci IN nacionalidad GROUPS ==="
## # A tibble: 3 x 4
##   nacionalidad  mean    sd   num
##   <fct>        <dbl> <dbl> <int>
## 1 colombiano    3.21 0.624   703
## 2 mexicano      3.11 0.625   454
## 3 venezolano    3.16 0.518    45
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

capacidad –groups Diferrences in Tenaci
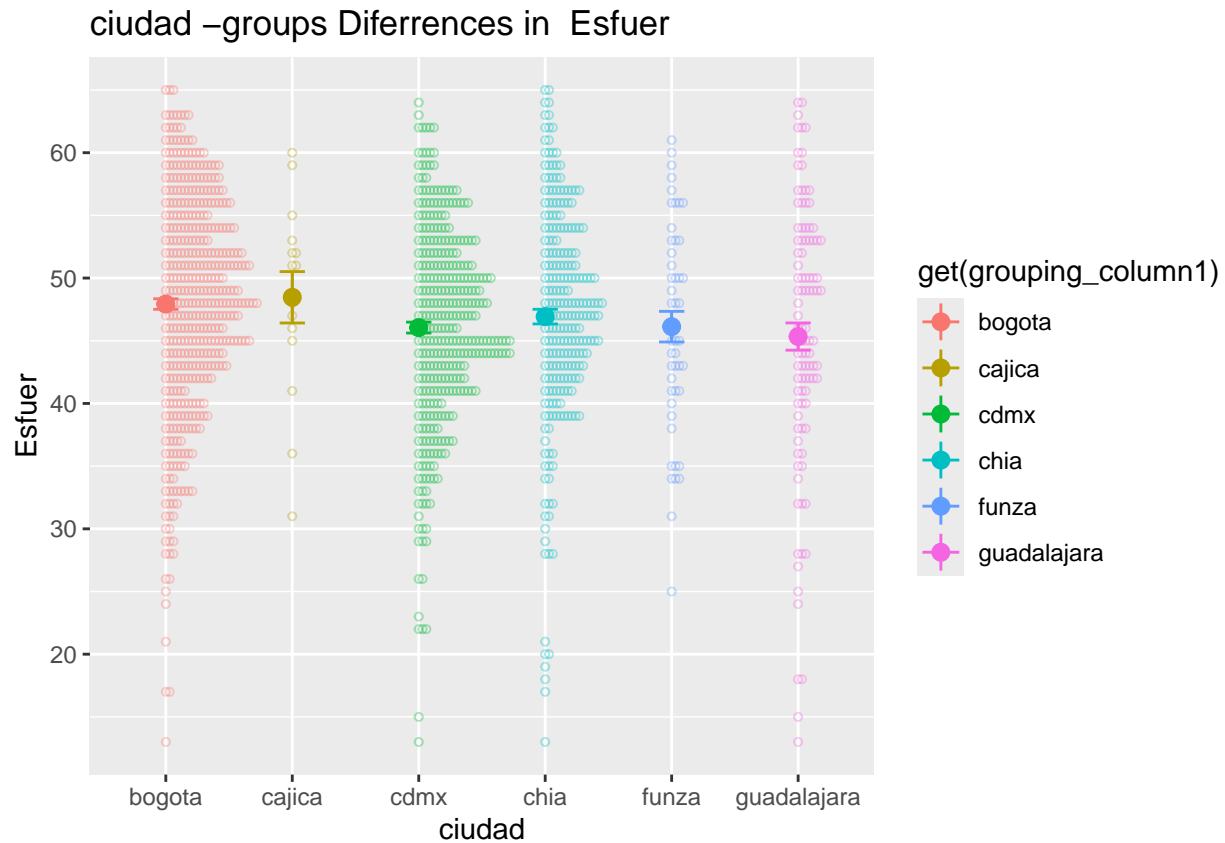
```
## [1] "=== DESCRIPTIVE STATS OF Tenaci IN capacidad GROUPS ==="
## # A tibble: 2 x 4
##   capacidad  mean    sd   num
##   <fct>     <dbl> <dbl> <int>
## 1 alta       3.21 0.618   560
## 2 tipica     3.14 0.625   642
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

escuela –groups Diferrences in Esfuer

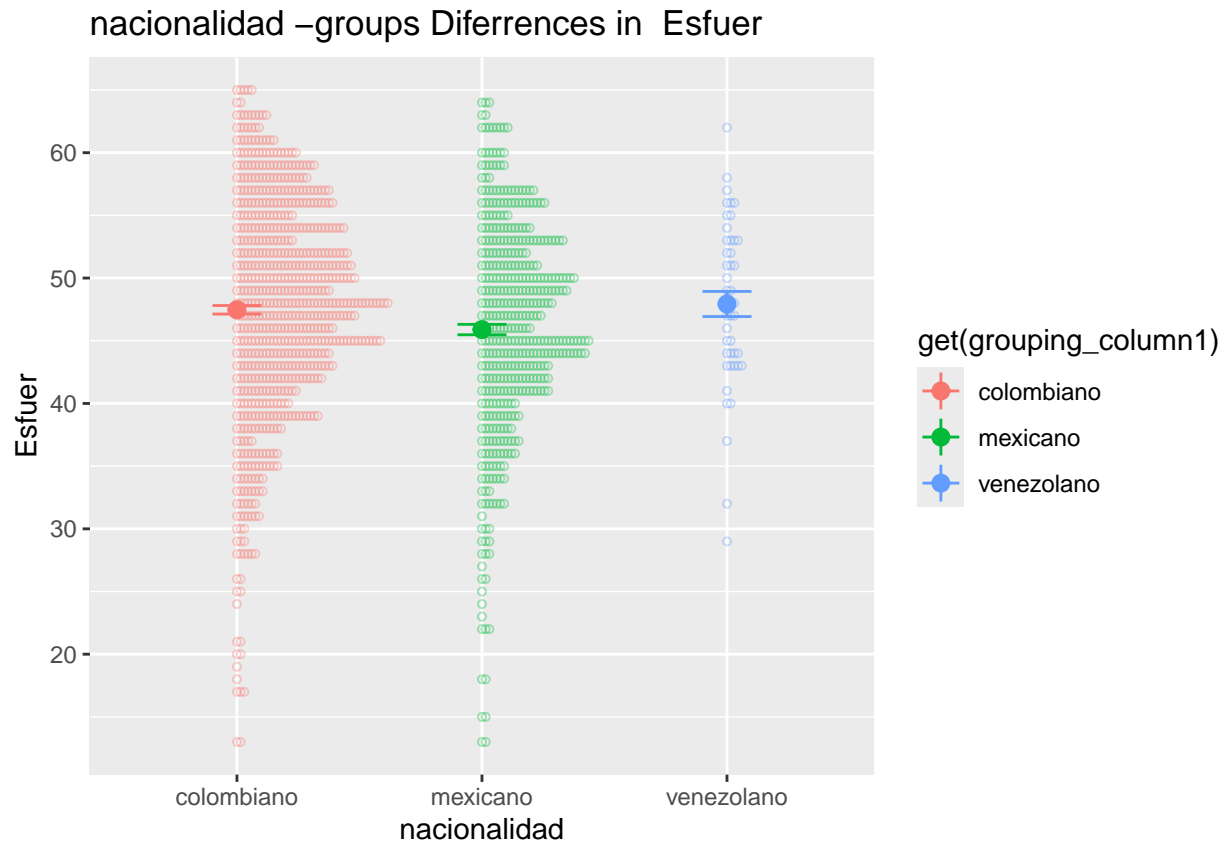
```
## [1] "=== DESCRIPTIVE STATS OF Esfuer IN escuela GROUPS ==="
## # A tibble: 10 x 4
##    escuela       mean    sd   num
##    <fct>        <dbl> <dbl> <int>
##  1 andes         48.1  9.87    63
##  2 bicentenario  48.4  9.90    67
##  3 cepac         45.3 10.9    101
##  4 coltec        46.1  8.37    49
##  5 diosa         47.0  8.99   265
##  6 esperanza     48.6 11.0     19
##  7 pidahi        46.1 10.7     25
##  8 primcongreso  45.1  8.27    81
##  9 secaugusto    46.4  7.86   247
## 10 villavicencio 47.7  8.27   285
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

grado –groups Diferrences in Esfuer
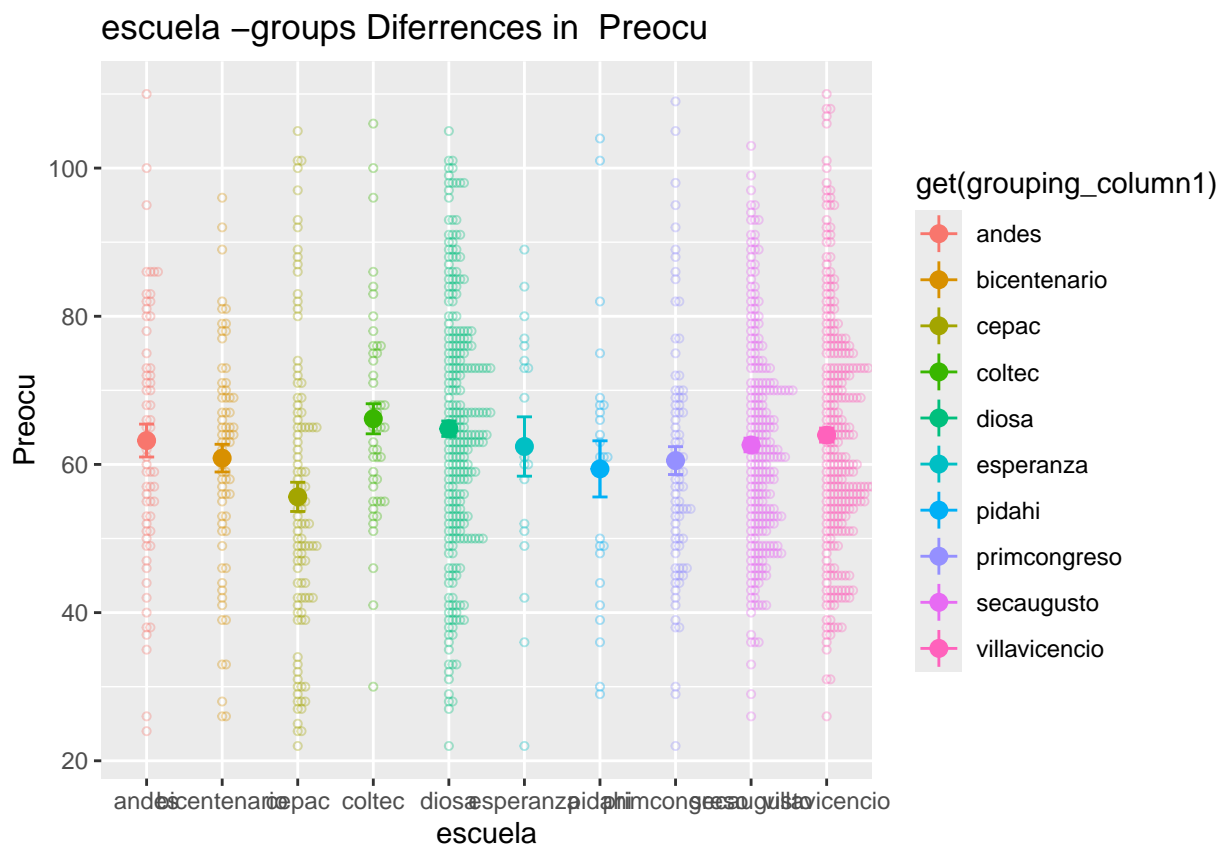
```
## [1] "=== DESCRIPTIVE STATS OF Esfuer IN grado GROUPS ==="
## # A tibble: 20 x 4
##    grado  mean    sd    num
##    <fct> <dbl> <dbl> <int>
##  1 1a     49.6  6.61    32
##  2 1b     47.4  7.77    35
##  3 1c     46.0 10.6     26
##  4 1d     45.1  8.46    31
##  5 2a     47.3  9.58    52
##  6 2b     43   10.7     34
##  7 2c     42.9 10.0     38
##  8 2d     45.6  8.02    28
##  9 3a     44.8  9.42    36
## 10 3b     47.9  8.09    29
## 11 3c     46.5  5.37    15
## 12 3d     48    7.32    17
## 13 6      47.4  9.27   252
## 14 6a     43.4  6.41    21
## 15 6b     46.4  7.23    16
## 16 6c     44.1 10.6     19
## 17 6d     46.4  8.39    25
## 18 7      48.2  8.75   195
## 19 8      46.7  8.87   172
## 20 9      47.7  8.37   129
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

ciudad –groups Diferrences in Esfuer
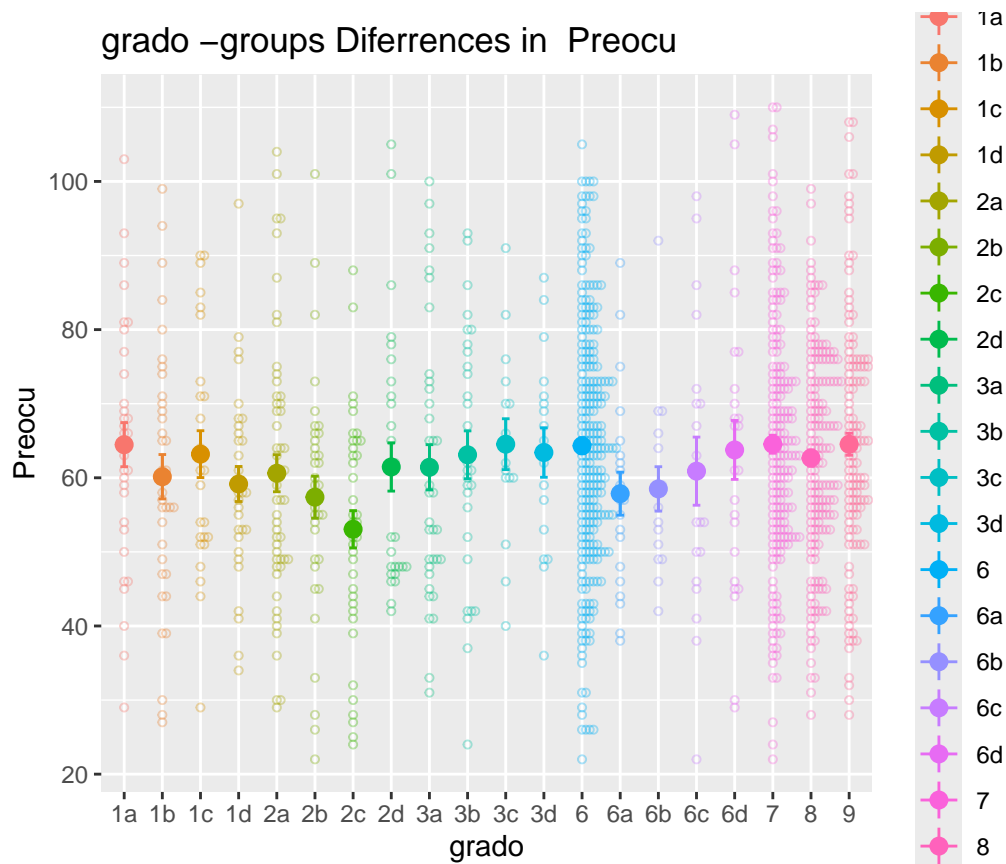


```
## [1] "=== DESCRIPTIVE STATS OF Esfuer IN ciudad GROUPS ==="
## # A tibble: 6 x 4
##   ciudad        mean    sd    num
##   <fct>        <dbl> <dbl>  <int>
## 1 bogota        47.9  8.86    443
## 2 cajica        48.5  7.94     15
## 3 cdmx          46.1  8.18    353
## 4 chia          46.9  9.08    242
## 5 funza         46.1  8.45     48
## 6 guadalajara   45.3 10.9     101
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

nacionalidad –groups Diferrences in Esfuer

```
## [1] "=== DESCRIPTIVE STATS OF Esfuer IN nacionalidad GROUPS ==="
## # A tibble: 3 x 4
##   nacionalidad  mean    sd   num
##   <fct>        <dbl> <dbl> <int>
## 1 colombiano    47.5  9.01   703
## 2 mexicano      45.9  8.85   454
## 3 venezolano    47.9  6.74    45
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

escuela –groups Diferrences in Preocu

```
## [1] "=== DESCRIPTIVE STATS OF Preocu IN escuela GROUPS ==="
## # A tibble: 10 x 4
##    escuela       mean    sd   num
##    <fct>        <dbl> <dbl> <int>
##  1 andes         63.2  17.6    63
##  2 bicentenario  60.9  15.3    67
##  3 cepac         55.6  19.8   101
##  4 coltec        66.2  14.2    49
##  5 diosa         64.8  17.0   265
##  6 esperanza     62.4  17.4    19
##  7 pidahi        59.4  19.0    25
##  8 primcongreso  60.5  16.9    81
##  9 secaugusto    62.6  14.5   247
## 10 villavicencio 64.0  16.0   285
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```

grado –groups Diferrences in Preocu

```
## [1] "=== DESCRIPTIVE STATS OF Preocu IN grado GROUPS ==="
## # A tibble: 20 x 4
##    grado  mean    sd   num
##    <fct> <dbl> <dbl> <int>
##  1 1a     64.5  16.8    32
##  2 1b     60.1  17.7    35
##  3 1c     63.2  16.1    26
##  4 1d     59.2  13.2    31
##  5 2a     60.6  18.0    52
##  6 2b     57.4  16.5    34
##  7 2c     53.1  15.5    38
##  8 2d     61.5  17.2    28
##  9 3a     61.4  18.3    36
## 10 3b     63.1  17.4    29
## 11 3c     64.5  13.3    15
## 12 3d     63.4  13.8    17
## 13 6      64.3  17.0   252
## 14 6a     57.9  13.3    21
## 15 6b     58.5  12.0    16
## 16 6c     60.9  20.0    19
## 17 6d     63.8  19.9    25
## 18 7      64.5  16.9   195
## 19 8      62.7  14.3   172
## 20 9      64.5  16.9   129
## [1] "=== GROUP DIFFERENCES GRAPH ==="
```
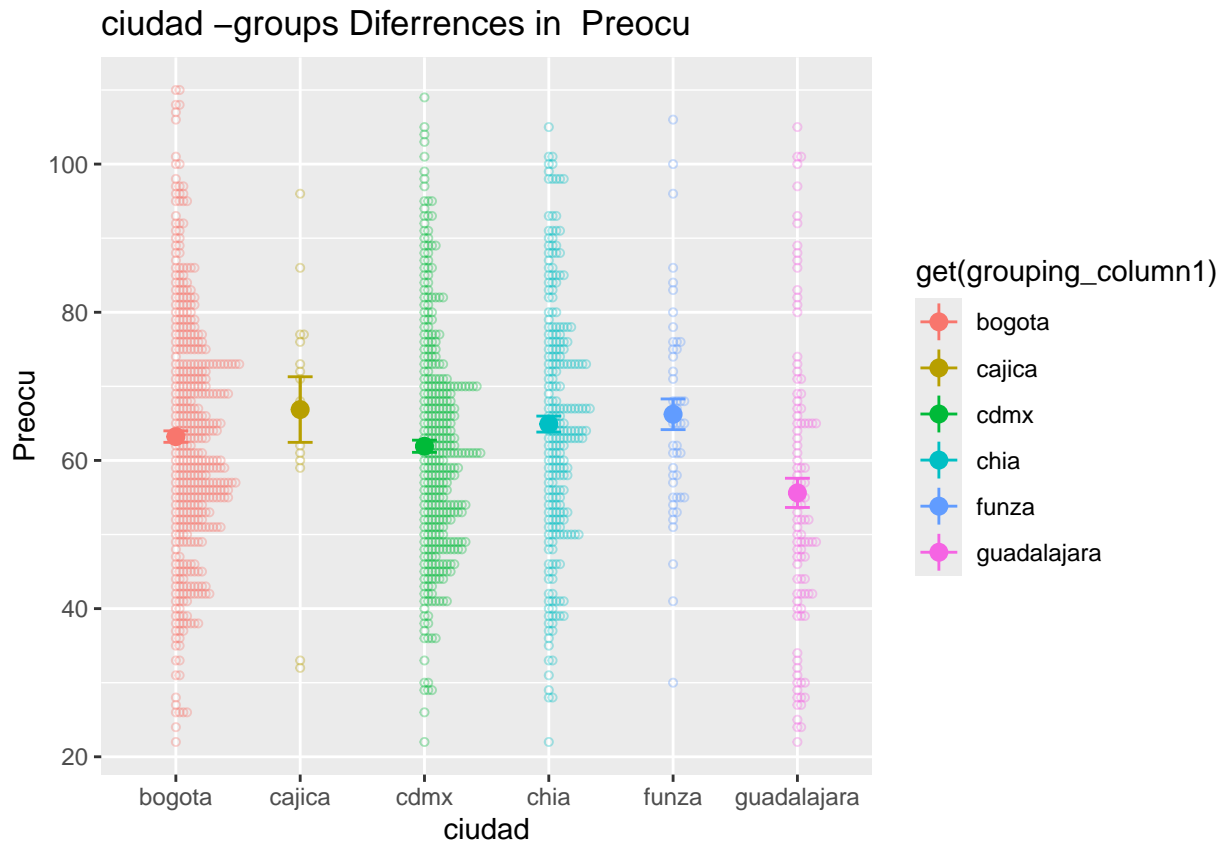
ciudad –groups Diferrences in Preocu
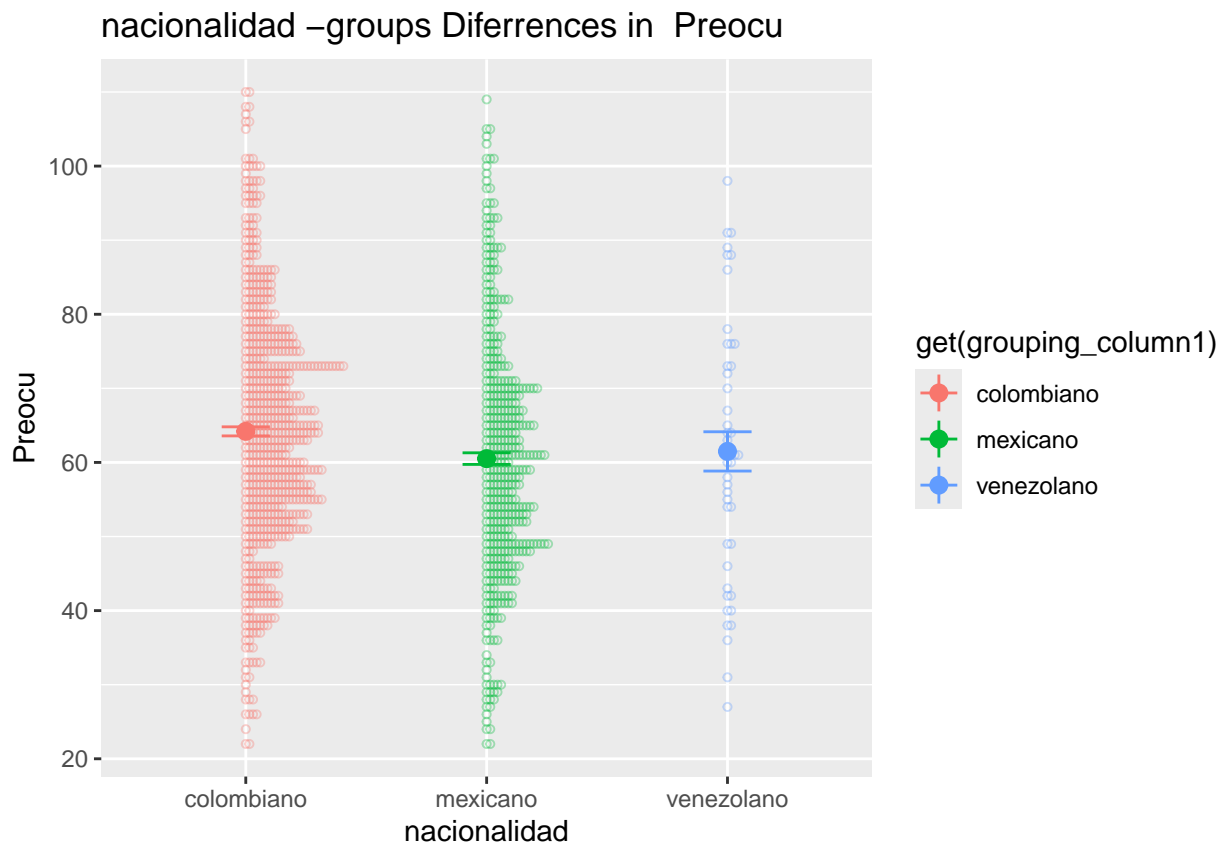


```
## [1] "=== DESCRIPTIVE STATS OF Preocu IN ciudad GROUPS ==="
## # A tibble: 6 x 4
##   ciudad        mean    sd   num
##   <fct>        <dbl> <dbl> <int>
## 1 bogota        63.2  16.3   443
## 2 cajica        66.9  17.1    15
## 3 cdmx          61.9  15.4   353
## 4 chia          64.9  16.8   242
## 5 funza         66.2  14.4    48
## 6 guadalajara   55.6  19.8   101
## [1] "=== GROUP DIFFERENCES GRAPH ==="

## [1] "=== DESCRIPTIVE STATS OF Preocu IN nacionalidad GROUPS ==="
## # A tibble: 3 x 4
##   nacionalidad mean    sd   num
##   <fct>       <dbl> <dbl> <int>
## 1 colombiano   64.2  16.3   703
## 2 mexicano     60.5  16.7   454
## 3 venezolano   61.5  17.8    45

##
## Attaching package: 'gridExtra'

## The following object is masked from 'package:dplyr':
##
##     combine
```

nacionalidad –groups Diferrences in Preocu


```
# SHOW RESULTS
categorical_results

## $fG
## $fG$escuela
##        xcepac xprimcongreso   xsecaugusto
##  8.453539e-16  6.966841e-03  1.962082e-07
##
## $fG$grado
##         x1b         x2a         x3a         x3b          x6          x8
## 0.002125176 0.002636762 0.001098538 0.004825131 0.034494787 0.037487880
##          x9
## 0.046386617
##
## $fG$ciudad
##        xcdmx xguadalajara
## 6.772918e-11 9.875281e-36
##
## $fG$capacidad
## [1] 2.005137e-17
##
##
## $Tenaci
## $Tenaci$escuela
## xprimcongreso
##   0.006709368
##
```

```
## $Tenaci$grado
##         x6a         x6c
## 0.009994055 0.003121953
##
## $Tenaci$ciudad
##        xcdmx
## 0.001419448
##
## $Tenaci$nacionalidad
##   xmexicano
## 0.006650907
##
## $Tenaci$capacidad
## [1] 0.04793674
##
##
## $Esfuer
## $Esfuer$escuela
## xprimcongreso
##    0.04431305
##
## $Esfuer$grado
##          x1d          x2b          x2c          x3a          x6a          x6c
## 0.044021673 0.002543359 0.001648638 0.027042924 0.012576949 0.030856235
##
## $Esfuer$ciudad
##        xcdmx xguadalajara
##  0.003100297  0.008215657
##
## $Esfuer$nacionalidad
##   xmexicano
## 0.003205683
##
##
## $Preocu
## $Preocu$escuela
##      xcepac
## 0.004002426
##
## $Preocu$grado
##          x2c
## 0.003962269
##
## $Preocu$ciudad
## xguadalajara
## 2.899829e-05
##
## $Preocu$nacionalidad
##    xmexicano
## 0.0002189558
```

CORRELATION ANALYSES

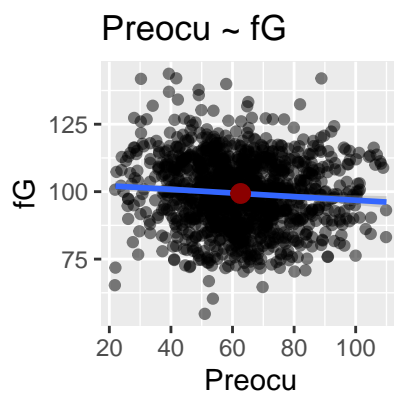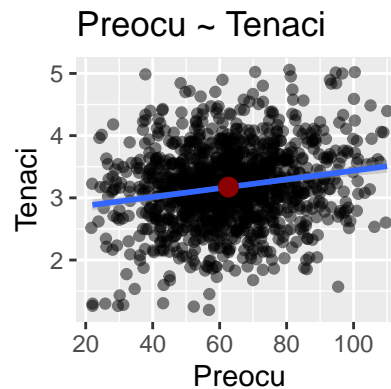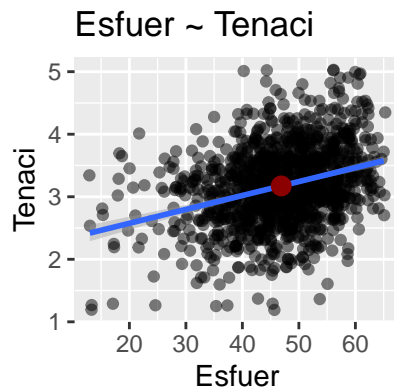Analysis of association among the following variables:

- G
- GRIT
- Esfuerzo
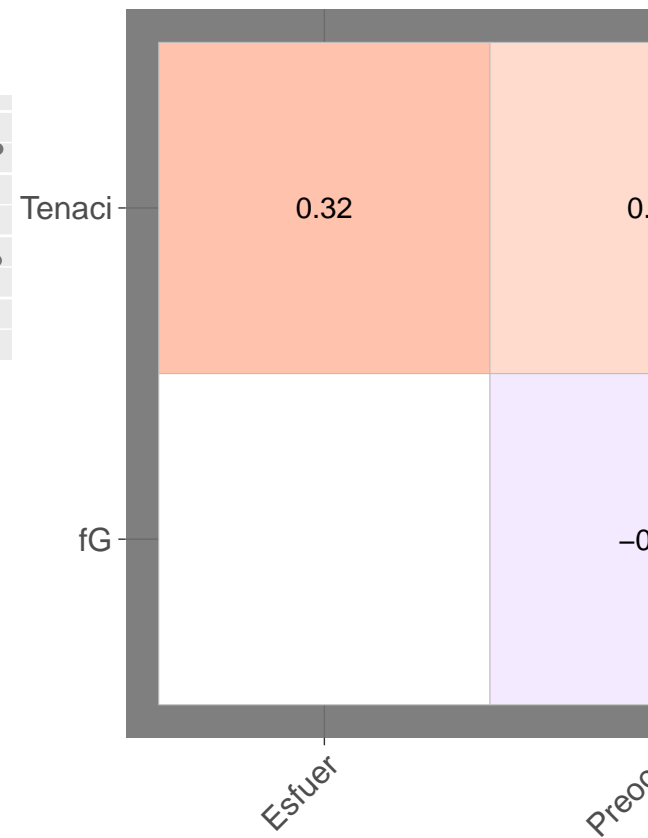- Preocupacion

Correlation Analisis.

```
scatterplot_significant_correlations(cormatrixrows, cormatrixrcols, sign=0.05)
```
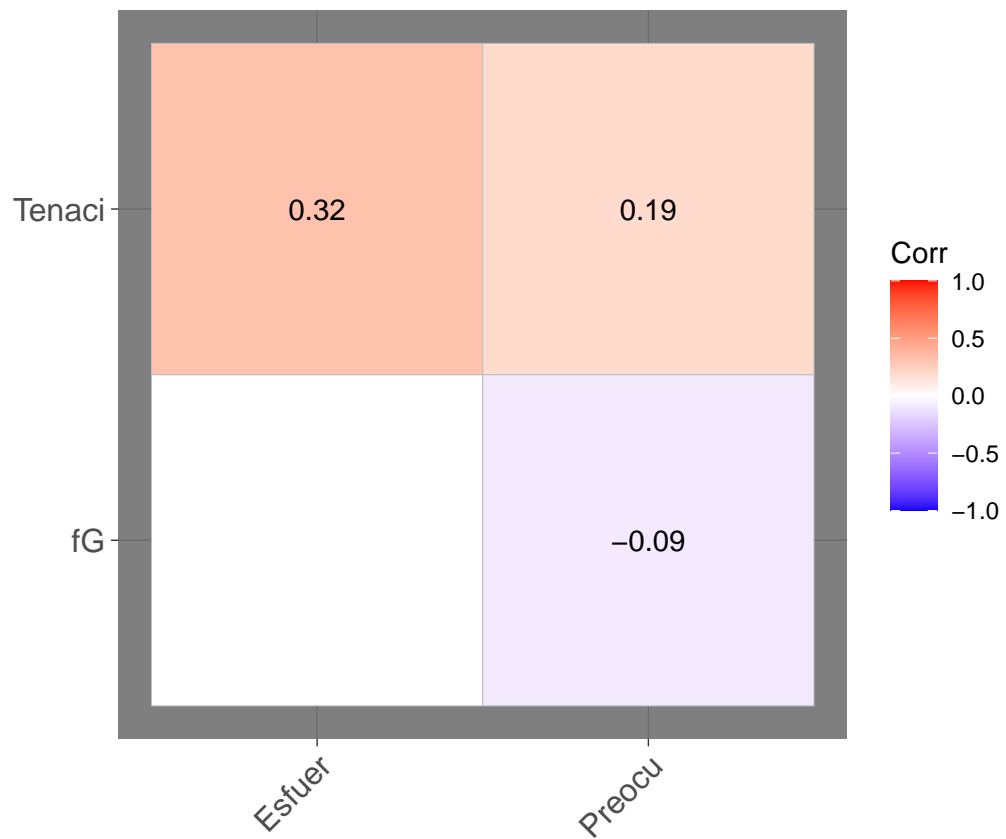
```
## [1] "Tenaci Esfuer _ r = 0.31817045 _ pval = 0"
## [1] "fG Preocu _ r = -0.0859733 _ pval = 0.003"
## [1] "Tenaci Preocu _ r = 0.18849035 _ pval = 0"

## `geom_smooth()` using formula = 'y ~ x'
## `geom_smooth()` using formula = 'y ~ x'
## `geom_smooth()` using formula = 'y ~ x'
```



```
## [[1]]
```
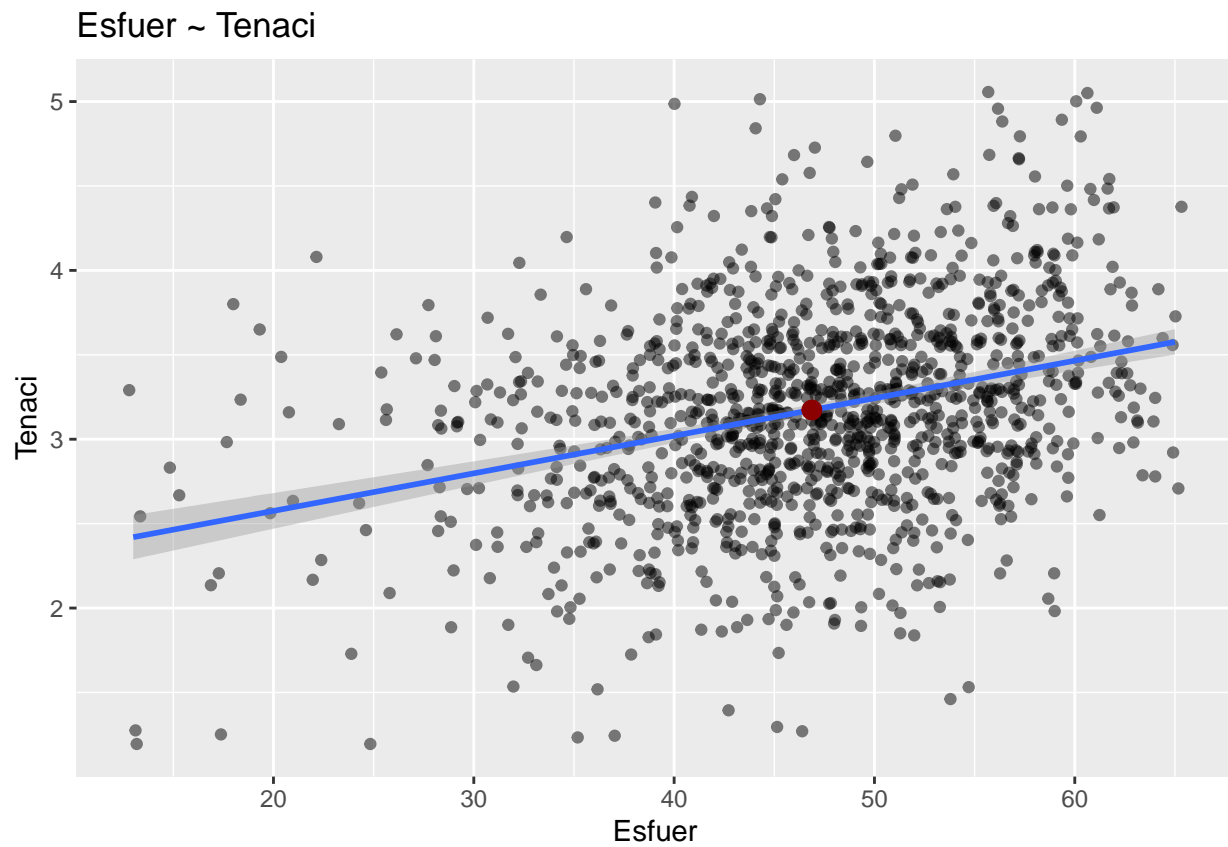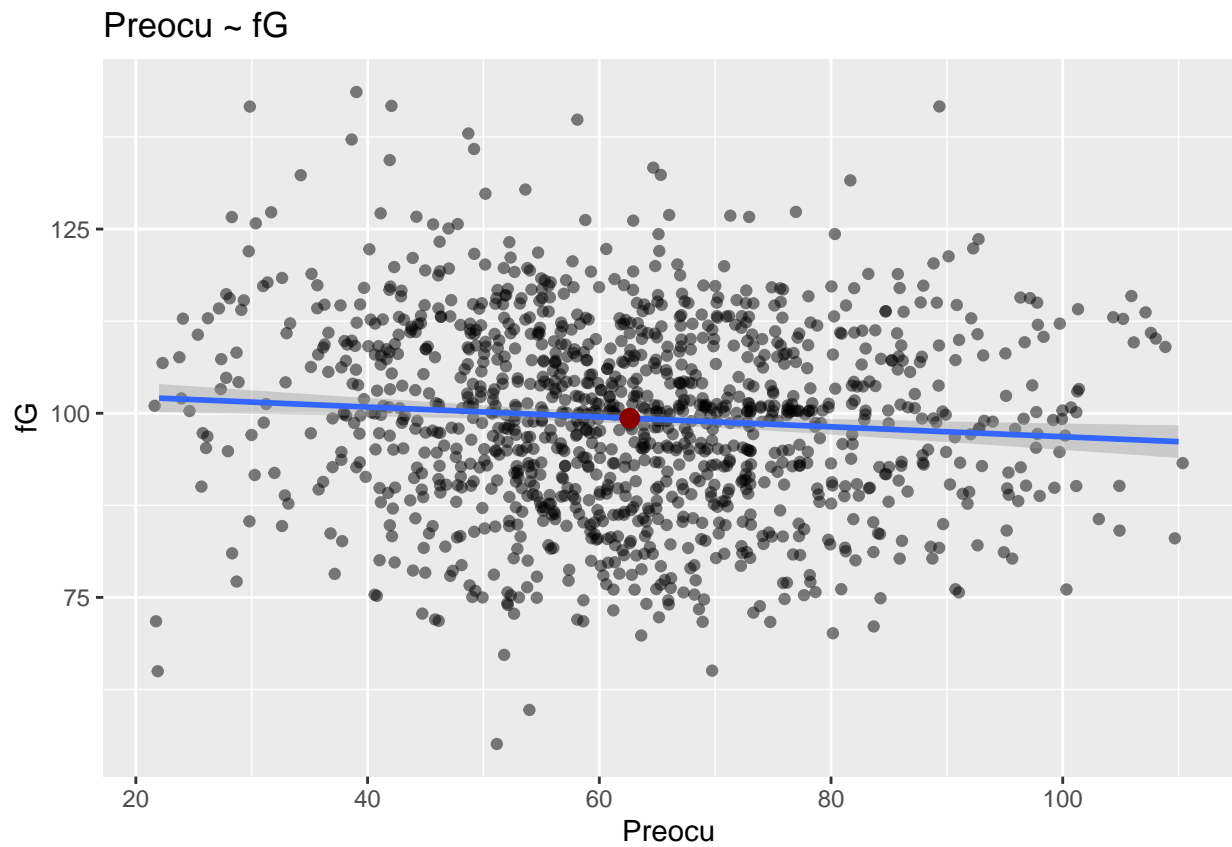
```
## 
## [[2]]
## [[2]][[1]]

## `geom_smooth()` using formula = 'y ~ x'
```

Esfuer ~ Tenaci


```
##
## [[2]][[2]]

## 'geom_smooth()' using formula = 'y ~ x'
```

Preocu ~ fG

```
##
## [[2]][[3]]
```

```
## 'geom_smooth()' using formula = 'y ~ x'
```

Preocu ~ Tenaci