R version 3.4.2 (2017-09-28) -- "Short Summer"

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Platform: x86\_64-w64-mingw32/x64 (64-bit)

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Natural language support but running in an English locale

R is a collaborative project with many contributors.

Type 'contributors()' for more information and

'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or

'help.start()' for an HTML browser interface to help.

Type 'q()' to quit R.

[Previously saved workspace restored]

> q

function (save = "default", status = 0, runLast = TRUE)

.Internal(quit(save, status, runLast))

<bytecode: 0x000000001b59a4b0>

<environment: namespace:base>

> install.packages("GISTools",dep=TRUE)

Installing package into ‘C:/Users/Suzette King/Documents/R/win-library/3.4’

(as ‘lib’ is unspecified)

--- Please select a CRAN mirror for use in this session ---

trying URL 'https://cran.ma.imperial.ac.uk/bin/windows/contrib/3.4/GISTools\_0.7-4.zip'

Content type 'application/zip' length 3460616 bytes (3.3 MB)

downloaded 3.3 MB

package ‘GISTools’ successfully unpacked and MD5 sums checked

The downloaded binary packages are in

C:\Users\Suzette King\AppData\Local\Temp\Rtmp2VIbxU\downloaded\_packages

> data(newhaven)

Warning message:

In data(newhaven) : data set ‘newhaven’ not found

> setwd("c:/temp")

> library(foreign)

> my.data<-read.spss("UniWd-ED91data-Vote97.sav",to.data.frame=T)

re-encoding from CP1252

> head(my.data)

ed91 Easting Northing area allppl VoteIndex wht\_oth\_pc ipb\_pc

1 08CXGD01 414688 434459 51983.5 464 106.49 30.47 65.24

2 08CXGD02 414874 434450 23364.0 334 85.10 42.73 55.19

3 08CXGD03 414788 434351 21365.0 473 123.30 8.67 91.12

4 08CXGD04 414906 434204 93963.5 371 106.22 20.75 75.74

5 08CXGD05 414877 434094 12010.5 168 109.74 29.24 70.18

6 08CXGD06 414851 433963 37757.5 466 90.51 18.42 77.94

non\_home\_own\_pc no\_car\_pc overcr\_pc loneparent\_pc unemp\_pc single\_pens\_pc

1 45.52 51.13 8.27 1.42 11.72 21.21

2 58.82 80.00 9.70 3.90 15.42 26.67

3 12.26 64.15 9.52 1.71 13.81 5.61

4 64.60 77.48 6.31 1.65 14.50 32.73

5 38.64 58.14 4.65 1.79 17.14 6.82

6 41.54 68.22 8.40 2.60 16.97 10.94

single\_pers\_pc ft\_pc stud\_pc hh\_llti\_pc Multi\_stress

1 10.61 23.81 5.86 10.78 One stress indicator

2 20.00 23.35 3.08 17.96 Three stress indicators

3 8.41 20.90 4.85 12.47 Four stress indicators

4 11.82 15.50 7.00 19.41 Four stress indicators

5 34.09 26.67 12.38 9.52 Three stress indicators

6 19.53 22.02 7.22 11.80 Three stress indicators

multistress

1 None or little stress

2 Multiple stress

3 Multiple stress

4 Multiple stress

5 Multiple stress

6 Multiple stress

> class(my.data)

[1] "data.frame"

> class(my.data[,1])

[1] "factor"

> class(my.data[,2])

[1] "numeric"

> class(my.data[,3])

[1] "numeric"

> class(my.data[,4])

[1] "numeric"

> class(my.data[,5])

[1] "numeric"

> class(my.data[,6])

[1] "numeric"

> class(my.data[,7])

[1] "numeric"

> class(my.data[1,])

[1] "data.frame"

> class(my.data[2,])

[1] "data.frame"

> summary(my.data)

ed91 Easting Northing area

08CXGD01: 1 Min. :414263 Min. :431778 Min. : 6611

08CXGD02: 1 1st Qu.:414766 1st Qu.:432510 1st Qu.: 26590

08CXGD03: 1 Median :415068 Median :432738 Median : 42490

08CXGD04: 1 Mean :415121 Mean :433103 Mean : 91492

08CXGD05: 1 3rd Qu.:415504 3rd Qu.:433998 3rd Qu.: 85932

08CXGD06: 1 Max. :416217 Max. :434459 Max. :629794

(Other) :44

allppl VoteIndex wht\_oth\_pc ipb\_pc

Min. : 59.0 Min. : 51.42 Min. : 8.67 Min. : 6.29

1st Qu.:233.0 1st Qu.: 90.85 1st Qu.:19.38 1st Qu.:46.90

Median :390.0 Median :101.53 Median :32.30 Median :65.79

Mean :374.6 Mean :100.61 Mean :36.63 Mean :60.42

3rd Qu.:473.0 3rd Qu.:110.91 3rd Qu.:47.69 3rd Qu.:77.65

Max. :859.0 Max. :140.79 Max. :92.00 Max. :91.12

non\_home\_own\_pc no\_car\_pc overcr\_pc loneparent\_pc

Min. : 9.52 Min. :32.89 Min. : 0.000 Min. :0.000

1st Qu.:26.66 1st Qu.:56.25 1st Qu.: 3.340 1st Qu.:0.620

Median :46.98 Median :62.33 Median : 4.785 Median :1.680

Mean :49.11 Mean :64.14 Mean : 4.978 Mean :2.459

3rd Qu.:67.34 3rd Qu.:75.84 3rd Qu.: 6.700 3rd Qu.:4.140

Max. :95.35 Max. :89.84 Max. :14.670 Max. :8.250

unemp\_pc single\_pens\_pc single\_pers\_pc ft\_pc

Min. : 4.29 Min. : 0.000 Min. : 3.36 Min. : 8.09

1st Qu.:13.81 1st Qu.: 5.688 1st Qu.:10.06 1st Qu.:19.62

Median :15.40 Median : 8.965 Median :16.87 Median :23.81

Mean :15.68 Mean :12.140 Mean :25.19 Mean :23.64

3rd Qu.:17.21 3rd Qu.:15.307 3rd Qu.:38.35 3rd Qu.:27.23

Max. :24.26 Max. :49.230 Max. :73.33 Max. :33.91

stud\_pc hh\_llti\_pc Multi\_stress

Min. : 0.700 Min. : 3.17 No stress : 5

1st Qu.: 6.412 1st Qu.:10.20 One stress indicator :10

Median :12.320 Median :12.81 Two stress indicators :13

Mean :13.503 Mean :14.08 Three stress indicators:15

3rd Qu.:16.500 3rd Qu.:15.48 Four stress indicators : 7

Max. :38.460 Max. :35.84

multistress

None or little stress:15

Multiple stress :35

> sd(my.data$ipb\_pc)

[1] 21.89843

> sd(my.data[,8])

[1] 21.89843

> length(my.data$ipb\_pc)

[1] 50

> summary(my.data$ipb\_pc)

Min. 1st Qu. Median Mean 3rd Qu. Max.

6.29 46.90 65.79 60.42 77.65 91.12

> h=hist(my.data$VoteIndex,breaks=10)

> h=hist(my.data$VoteIndex,breaks=10,main="Histogram of Vote Index",xlab="Vote Index",las=1,col="red")

> xfit<-seq(min(my.data$VoteIndex),max(my.data$VoteIndex),length=length(my.data$VoteIndex))yfit<-dnorm(xfit,mean=mean(my.data$VoteIndex),sd=sd(my.data$VoteIndex))yfit<-yfit\*diff(h$mids[1:2])\*length(my.data$VoteIndex)lines(xfit,yfit,col="black",lwd=2)

Error: unexpected symbol in "xfit<-seq(min(my.data$VoteIndex),max(my.data$VoteIndex),length=length(my.data$VoteIndex))yfit"

> xfit<-seq(min(my.data$VoteIndex),max(my.data$VoteIndex),length=length(my.data$VoteIndex))yfit<-dnorm(xfit,mean=mean(my.data$VoteIndex),sd=sd(my.data$VoteIndex))yfit<-yfit\*diff(h$mids[1:2])\*length(my.data$VoteIndex)lines(xfit,yfit,col="black",lwd=2)

Error: unexpected symbol in "xfit<-seq(min(my.data$VoteIndex),max(my.data$VoteIndex),length=length(my.data$VoteIndex))yfit"

> xfit<-seq(min(my.data$VoteIndex),

+ max(my.data$VoteIndex),

+ length=length(my.data$VoteIndex))

> yfit<-dnorm(xfit,mean=mean(my.data$VoteIndex),

+ sd=sd(my.data$VoteIndex))

> yfit<-yfit\*diff(h$mids[1:2])\*length(my.data$VoteIndex)

> lines(xfit,yfit,col="black",lwd=2)

Error in plot.xy(xy.coords(x, y), type = type, ...) :

plot.new has not been called yet

> q()

> xfit<-seq(min(my.data$VoteIndex), max(my.data$VoteIndex),length=length(my.data$VoteIndex))yfit<-dnorm(xfit,mean=mean(my.data$VoteIndex),sd=sd(my.data$VoteIndex))yfit<-yfit\*diff(h$mids[1:2])\*length(my.data$VoteIndex)lines(xfit,yfit,col="black",lwd=2)

Error: unexpected symbol in "xfit<-seq(min(my.data$VoteIndex), max(my.data$VoteIndex),length=length(my.data$VoteIndex))yfit"

> xfit<-seq(min(my.data$VoteIndex),max(my.data$VoteIndex),length =length(my.data$VoteIndex))yfit<-dnorm(xfit, mean = mean(my.data$VoteIndex),sd = sd(my.data$VoteIndex))yfit <- yfit\*diff(h$mids[1:2])\*length(my.data$VoteIndex)lines(xfit, yfit, col="black", lwd=2)

Error: unexpected symbol in "xfit<-seq(min(my.data$VoteIndex),max(my.data$VoteIndex),length =length(my.data$VoteIndex))yfit"

> library(GISTools)

Loading required package: maptools

Loading required package: sp

Checking rgeos availability: TRUE

Loading required package: RColorBrewer

Loading required package: MASS

Loading required package: rgeos

rgeos version: 0.3-26, (SVN revision 560)

GEOS runtime version: 3.6.1-CAPI-1.10.1 r0

Linking to sp version: 1.2-5

Polygon checking: TRUE

Warning message:

package ‘GISTools’ was built under R version 3.4.4

> boxplot(my.data[,c(7,8,10,12,15)],

+ ylim = c(0,100),

+ outline = F,

+ col = brewer.pal(5, "Spectral"),

+ horizontal = T,

+ names = c("Var 1", "Var 2", "Var 3", "Var 4", "Var 5"))

> h = hist(my.data$VoteIndex, breaks = 10,

+ main = "Histogram of Vote Index",

+ xlab = "Vote Index",

+ las = 1,

+ col = "red")

> # now create the normal distribution

> # with the same properties as the variable

> xfit<-seq(min(my.data$VoteIndex),

+ max(my.data$VoteIndex),

+ length = length(my.data$VoteIndex))

> yfit<-dnorm(xfit, mean = mean(my.data$VoteIndex),

+ sd = sd(my.data$VoteIndex))

> yfit <- yfit\*diff(h$mids[1:2])\*length(my.data$VoteIndex)

> # and plot the curve

> lines(xfit, yfit, col="black", lwd=2)

Error in plot.xy(xy.coords(x, y), type = type, ...) :

plot.new has not been called yet

> h=hist(my.data$VoteIndex,breaks=10,main="Histogram of Vote Index",xlab="Vote Index",las=1,col="red")xfit<-seq(min(my.data$VoteIndex),max(my.data$VoteIndex),length =length(my.data$VoteIndex))yfit<-dnorm(xfit, mean = mean(my.data$VoteIndex),sd = sd(my.data$VoteIndex))yfit <- yfit\*diff(h$mids[1:2])\*length(my.data$VoteIndex)lines(xfit, yfit, col="black", lwd=2)

Error: unexpected symbol in "h=hist(my.data$VoteIndex,breaks=10,main="Histogram of Vote Index",xlab="Vote Index",las=1,col="red")xfit"

> library(GISTools)

> boxplot(my.data[,c(7,8,10,12,15)],

+ ylim = c(0,100),

+ outline = F,

+ col = brewer.pal(5, "Spectral"),

+ horizontal = T,

+ names = c("Var 1", "Var 2", "Var 3", "Var 4", "Var 5"))

> table(my.data$Multi\_stress)

No stress One stress indicator Two stress indicators Three stress indicators Four stress indicators

5 10 13 15 7

> table(my.data$Multi\_stress) / sum(table(my.data$Multi\_stress))

No stress One stress indicator Two stress indicators Three stress indicators Four stress indicators

0.10 0.20 0.26 0.30 0.14

> my.tab <- t(rbind(table(my.data$Multi\_stress),

+ table(my.data$Multi\_stress) /

+ sum(table(my.data$Multi\_stress))))

> colnames(my.tab) <- c("count", "percentage")

> my.tab

count percentage

No stress 5 0.10

One stress indicator 10 0.20

Two stress indicators 13 0.26

Three stress indicators 15 0.30

Four stress indicators 7 0.14

> write.csv(my.tab, "my.file.csv")

>