Assignment 2

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**Is the perception of media freedom associated with citizens’ satisfaction with democracy in Ghana?**

*Explainatory Variable*: Perception of Media Freedom (Q33H)

*Response Variable*: Satisfaction of democracy (Q31)

**Does primary langauge used in interview influence the length of the interview?**

*Explanatory Variable*: Language of interview (Q102)

*Response Variable*: Length of interview (LENGTH)

# SECTION 1:

library(descr)

## Warning: package 'descr' was built under R version 4.4.2

library(haven)

## Warning: package 'haven' was built under R version 4.4.2

GH\_AFRO\_9 <- read\_sav("C:/Users/AiAsum/Downloads/afrobarometer\_release-dataset\_gha\_r9\_en\_2023-04-01.sav")

# Section 2:

Sub

vars <- c("Q33H", "Q31", "Q102", "LENGTH")   
cleanData <- GH\_AFRO\_9[vars]  
save(cleanData, file='PA2\_Research.RDATA')

# Section 2 b: Error handling and Labeling variable response categories

# first research questions  
  
# Perception of Media Freedom (Q33H)  
cleanData$Q33H <- as.character(cleanData$Q33H)  
  
cleanData$Q33H[cleanData$Q33H == "8"] <- NA  
cleanData$Q33H[cleanData$Q33H == "9"] <- NA  
cleanData$Q33H[cleanData$Q33H == "-1"] <- NA  
  
  
# Satisfaction of democracy (Q31)  
cleanData$Q31 <- as.character(cleanData$Q31)  
cleanData$Q31[cleanData$Q31 == "8"] <- NA  
cleanData$Q31[cleanData$Q31 == "9"] <- NA  
cleanData$Q31[cleanData$Q31 == "-1"] <- NA  
  
  
  
# Second research question  
# Language of interview (Q102)  
cleanData$Q102 <- as.character(cleanData$Q102)  
  
  
summary(cleanData$LENGTH)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 30.00 56.00 66.00 71.47 80.00 394.00

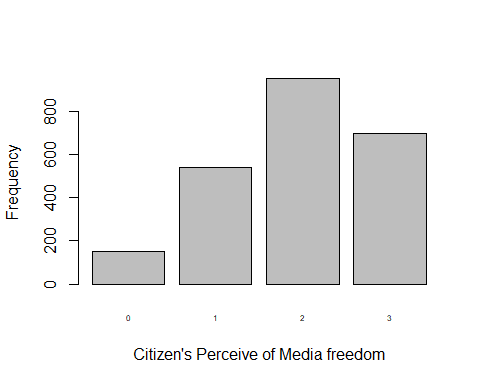
mean(cleanData$LENGTH, na.rm = TRUE)

## [1] 71.46644

sd(cleanData$LENGTH, na.rm = TRUE)

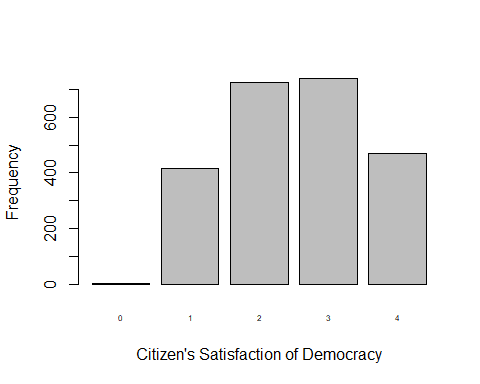
## [1] 28.4942

freq(cleanData$Q33H, cex.names=0.5, ylab = "Frequency", xlab = "Citizen's Perceive of Media freedom")



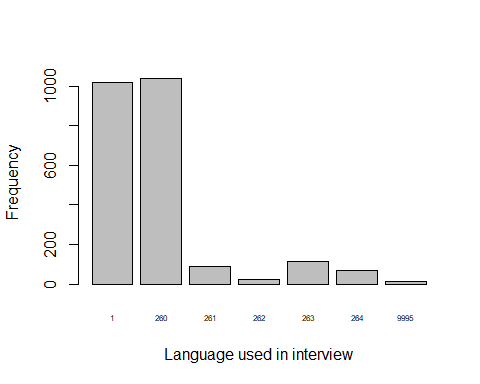
## cleanData$Q33H   
## Frequency Percent Valid Percent  
## 0 150 6.332 6.418  
## 1 540 22.794 23.107  
## 2 951 40.144 40.693  
## 3 696 29.379 29.782  
## NA's 32 1.351   
## Total 2369 100.000 100.000

freq(cleanData$Q31, cex.names=0.5, ylab = "Frequency", xlab = "Citizen's Satisfaction of Democracy")



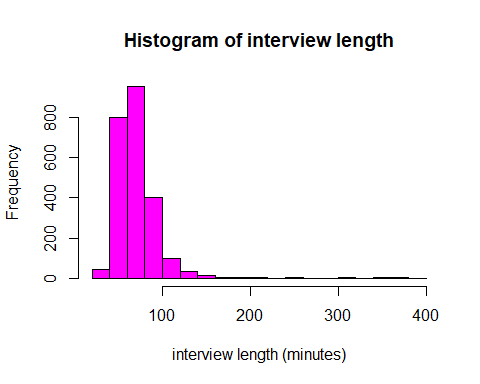
## cleanData$Q31   
## Frequency Percent Valid Percent  
## 0 3 0.1266 0.1274  
## 1 417 17.6024 17.7145  
## 2 725 30.6036 30.7986  
## 3 739 31.1946 31.3934  
## 4 470 19.8396 19.9660  
## NA's 15 0.6332   
## Total 2369 100.0000 100.0000

freq(cleanData$Q102, cex.names=0.5, ylab = "Frequency", xlab = "Language used in interview")



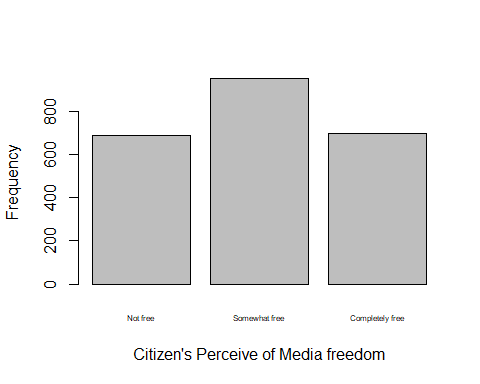
## cleanData$Q102   
## Frequency Percent  
## 1 1022 43.141  
## 260 1039 43.858  
## 261 91 3.841  
## 262 24 1.013  
## 263 112 4.728  
## 264 67 2.828  
## 9995 14 0.591  
## Total 2369 100.000

hist(cleanData$LENGTH, main="Histogram of interview length", xlab="interview length (minutes)", ylab="Frequency", col="#ff00ff")



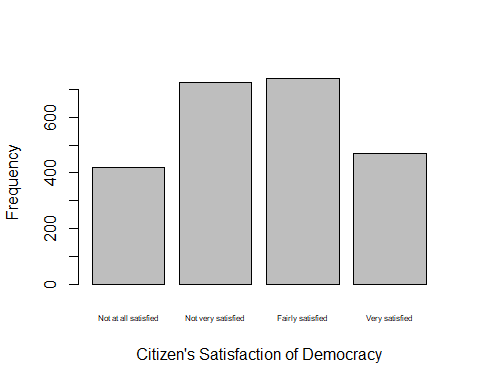
# Section 3 -

# I'm Creating secondary variables for media and democracy  
# I choose to combine Not at all free", "Not very free", as one,"Somewhat free", "Completely free"  
cleanData$Q33H[cleanData$Q33H == "0"] <- "1"  
  
# I choose to combine Not at all free", "Not very free", as one,"Somewhat free", "Completely free"  
cleanData$Q31[cleanData$Q31 == "0"] <- "1"  
  
  
# Second Research:  
# Primary Language used for the research  
cleanData$Q102 <- as.character(cleanData$Q102)  
cleanData$Q102[cleanData$Q102 == "261"] <- "9995"  
cleanData$Q102[cleanData$Q102 == "262"] <- "9995"  
cleanData$Q102[cleanData$Q102 == "263"] <- "9995"  
cleanData$Q102[cleanData$Q102 == "264"] <- "9995"  
  
  
# Changing to understanable variables  
 cleanData$Q33H <- factor(cleanData$Q33H,  
 levels = c("1", "2", "3"),  
 labels = c("Not free", "Somewhat free", "Completely free")  
 )  
  
 cleanData$Q31 <- factor(cleanData$Q31,  
 levels = c("1", "2", "3", "4"),  
 labels = c("Not at all satisfied",   
 "Not very satisfied", "Fairly satisfied",   
 "Very satisfied"))  
   
cleanData$Q102 <- factor(cleanData$Q102,  
 levels = c("1", "260", "9995"),  
 labels = c("English", "Twi", "Others"))  
  
freq(cleanData$Q33H, cex.names=0.5, ylab = "Frequency", xlab = "Citizen's Perceive of Media freedom")



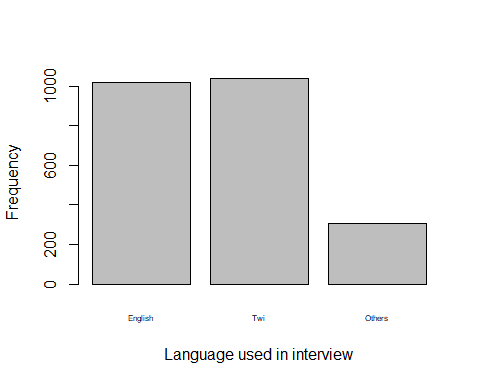
## cleanData$Q33H   
## Frequency Percent Valid Percent  
## Not free 690 29.126 29.53  
## Somewhat free 951 40.144 40.69  
## Completely free 696 29.379 29.78  
## NA's 32 1.351   
## Total 2369 100.000 100.00

freq(cleanData$Q31, cex.names=0.5, ylab = "Frequency", xlab = "Citizen's Satisfaction of Democracy")



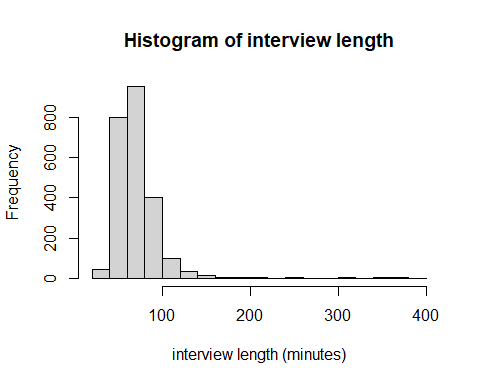
## cleanData$Q31   
## Frequency Percent Valid Percent  
## Not at all satisfied 420 17.7290 17.84  
## Not very satisfied 725 30.6036 30.80  
## Fairly satisfied 739 31.1946 31.39  
## Very satisfied 470 19.8396 19.97  
## NA's 15 0.6332   
## Total 2369 100.0000 100.00

freq(cleanData$Q102, cex.names=0.5, ylab = "Frequency", xlab = "Language used in interview")



## cleanData$Q102   
## Frequency Percent  
## English 1022 43.14  
## Twi 1039 43.86  
## Others 308 13.00  
## Total 2369 100.00

hist(cleanData$LENGTH, main = "Histogram of interview length", xlab = "interview length (minutes)")



# Section 4

# First Research  
  
mediaTable <- table(cleanData$Q31, cleanData$Q33H)  
mediaTable\_colProp <-prop.table(mediaTable, 2)  
round(mediaTable\_colProp, 3)

##   
## Not free Somewhat free Completely free  
## Not at all satisfied 0.267 0.138 0.143  
## Not very satisfied 0.356 0.342 0.216  
## Fairly satisfied 0.249 0.363 0.308  
## Very satisfied 0.128 0.156 0.333

# Second research  
tapply(cleanData$LENGTH, cleanData$Q102, mean, na.rm = TRUE)

## English Twi Others   
## 71.19472 72.52069 68.81169

tapply(cleanData$LENGTH, cleanData$Q102, sd, na.rm = TRUE)

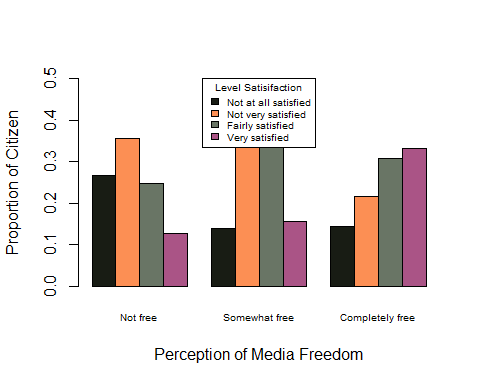
## English Twi Others   
## 25.61713 25.21517 43.81041

tapply(cleanData$LENGTH, cleanData$Q102, length)

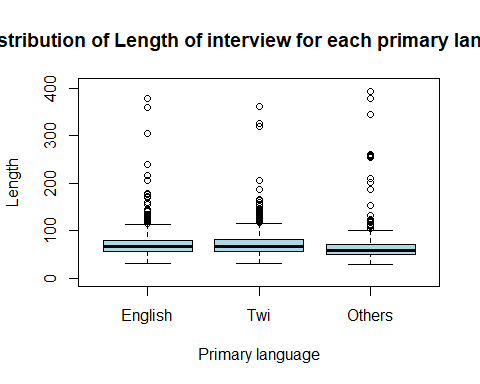
## English Twi Others   
## 1022 1039 308

# SECTION 4:

colors1 <- c("#AA5486", "#47663B", "#E8ECD7", "#EED3B1")  
colors2 <- c("#181C14", "#FC8F54", "#697565","#AA5486")  
  
barplot(  
 mediaTable\_colProp,   
 beside = TRUE,   
 cex.names = 0.6,  
 ylim = c(0, 0.5),  
 col = colors2,   
 xlab = "Perception of Media Freedom",   
 ylab = "Proportion of Citizen"  
)  
  
legend(  
 "top",   
 legend = rownames(mediaTable\_colProp),  
 fill = colors2,  
 title = "Level Satisifaction",  
 cex = 0.6  
)



# Box and whiaker plot  
boxplot(cleanData$LENGTH ~ factor(cleanData$Q102),  
 names = levels(factor(cleanData$Q102)),  
 main = "Distribution of Length of interview for each primary langauge",  
 xlab = "Primary language",  
 ylab = "Length",  
 ylim = c(0, max(cleanData$LENGTH, na.rm = TRUE) + 10),  
 col = "lightblue"  
)



## Summary

to have the perception that that all civil servant are corruption compare to other living condition.