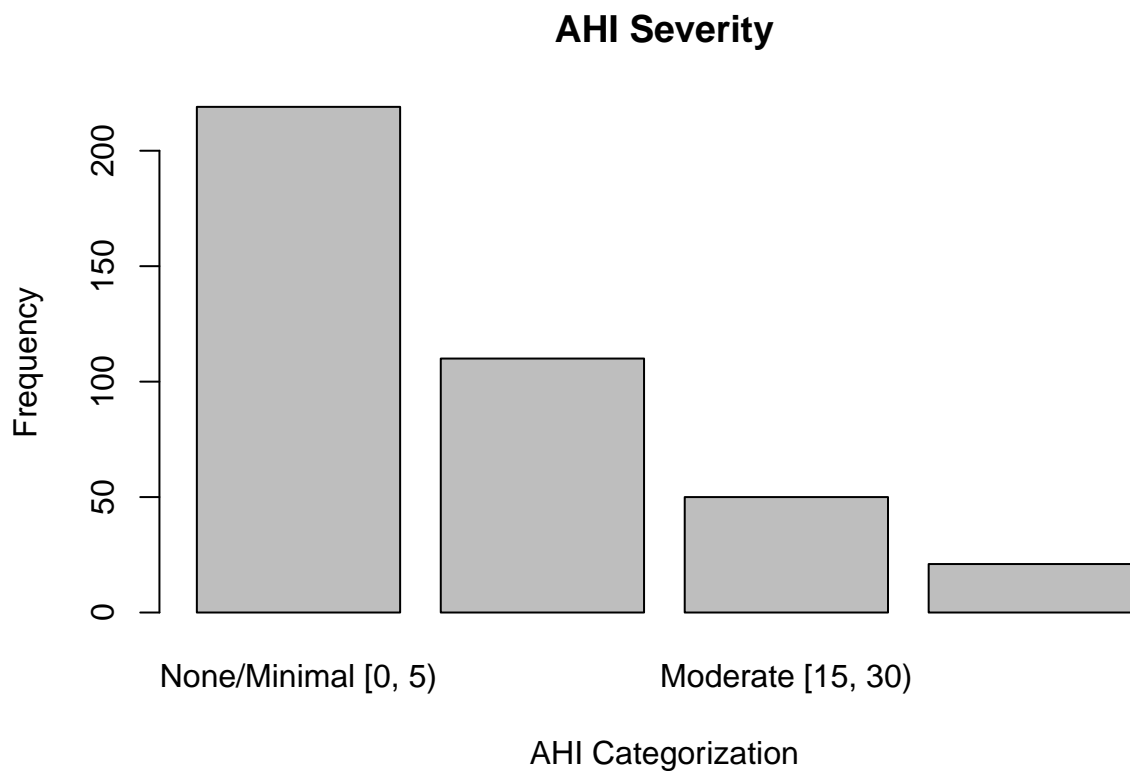


# EDA

Christopher Thornton

2023-05-23

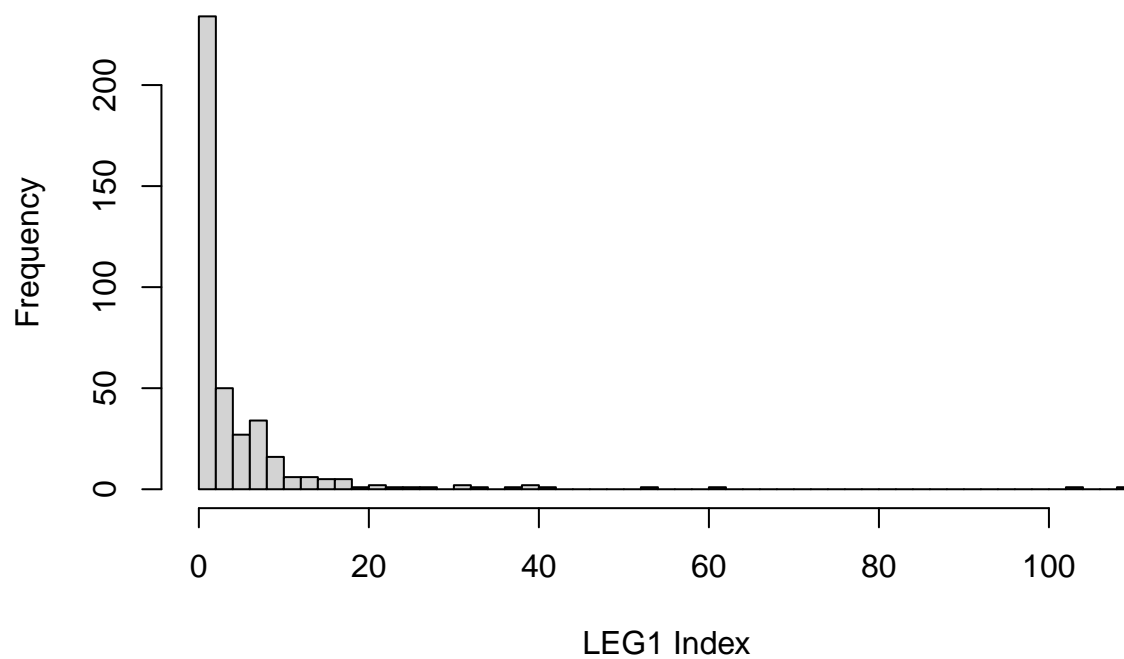
```
library(dplyr)
data <- readr::read_tsv("Jan to Mar15 2023.csv") %>% select(!c(Selected,RecordNo,`Recording Date`,`Score`,
  `Record Type`,`SleepStudy:EKG Analysis`,`Sleep:Generic11:`,`Sleep:Generic20:`)) # Theoretical
data <- data %>% select(AHI,`Apnea Counts`,`LEG1 Index`,`LEG2 Index`) %>% mutate(`AHI Severity`=case_who
barplot(sort(table(data$`AHI Severity`),decreasing = T),main="AHI Severity",xlab="AHI Categorization",y
```



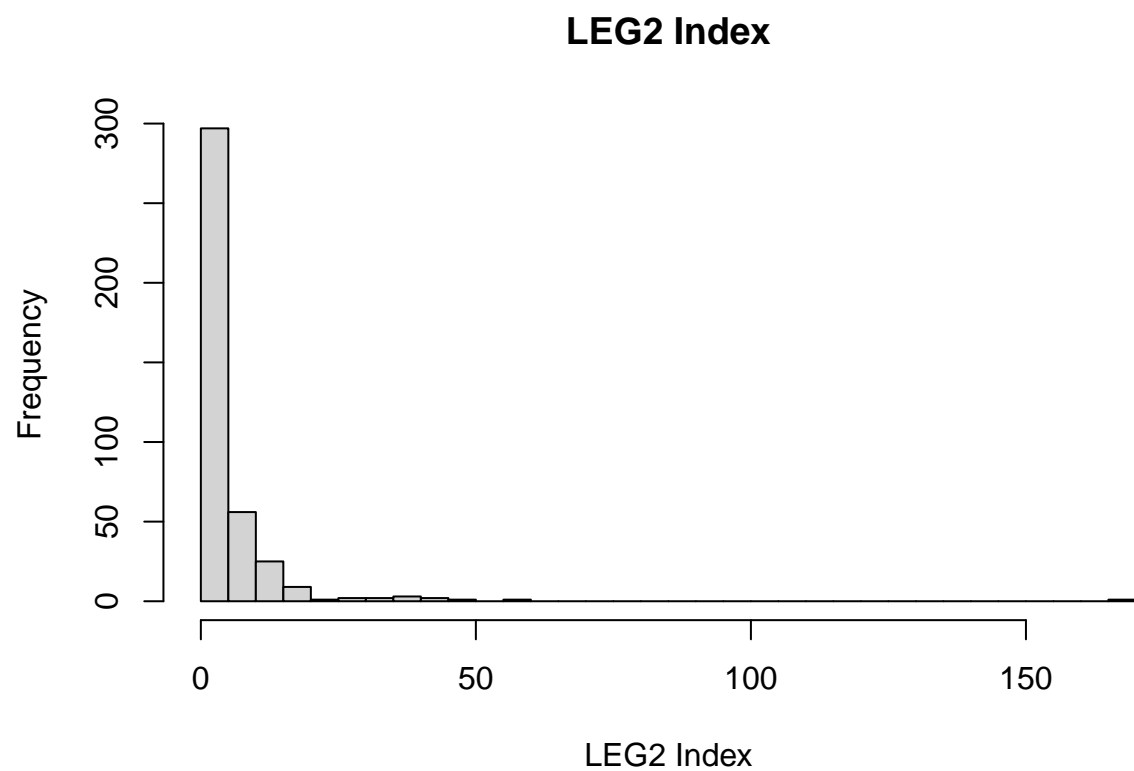
```
sort(table(data$`AHI Severity`),decreasing = T)

##
## None/Minimal [0, 5)      Mild [5, 15)      Moderate [15, 30)      Severe [30, inf)
##              219              110              50              21
hist(data$`LEG1 Index`,breaks=50,main="LEG1 Index",xlab="LEG1 Index")
```

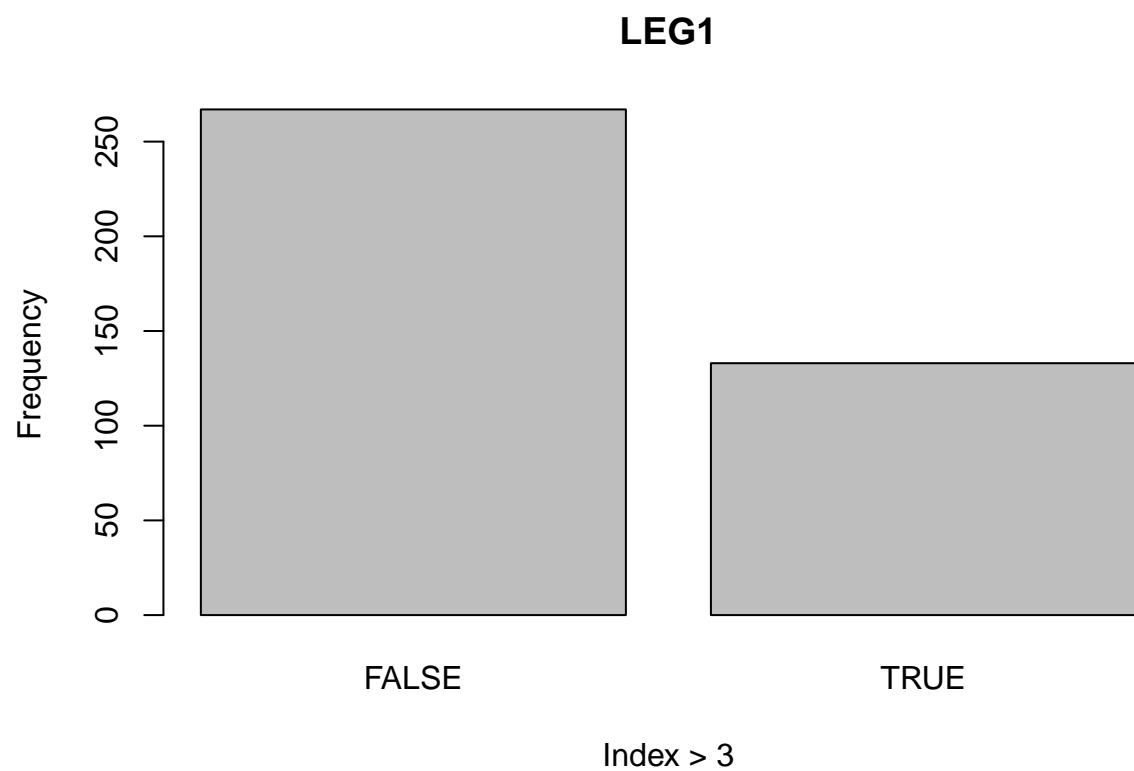
## LEG1 Index



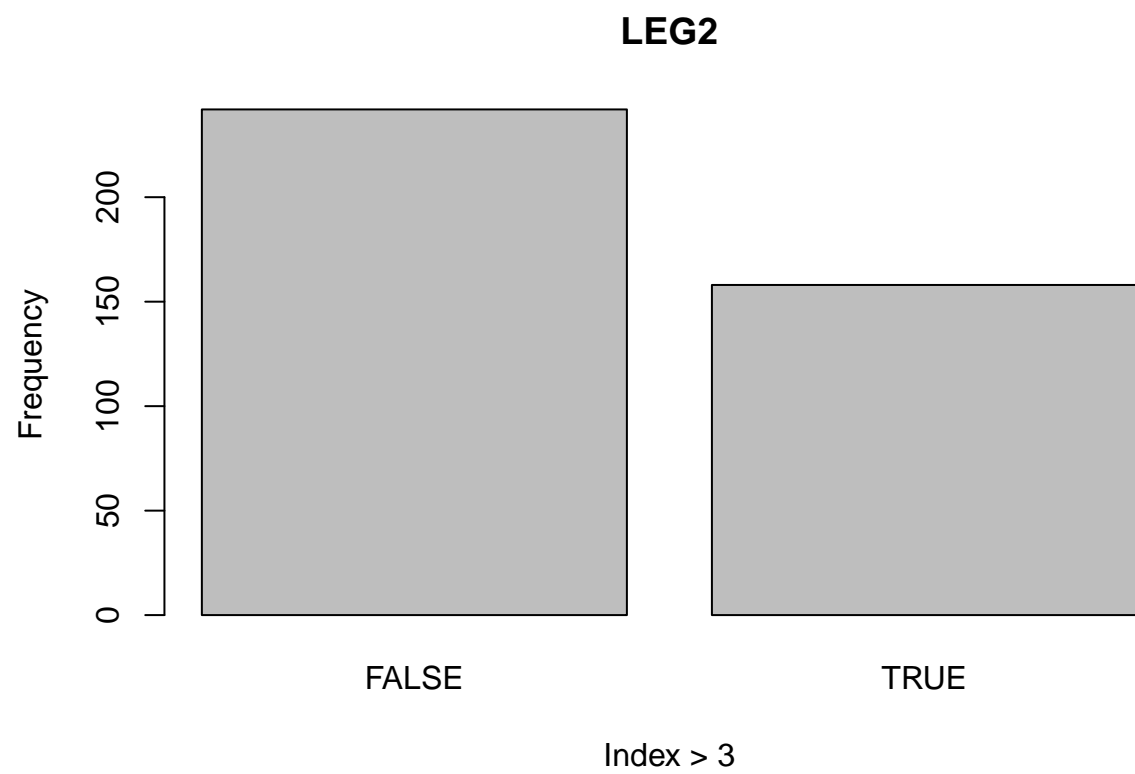
```
hist(data$`LEG2 Index`,breaks=50,main="LEG2 Index",xlab="LEG2 Index")
```



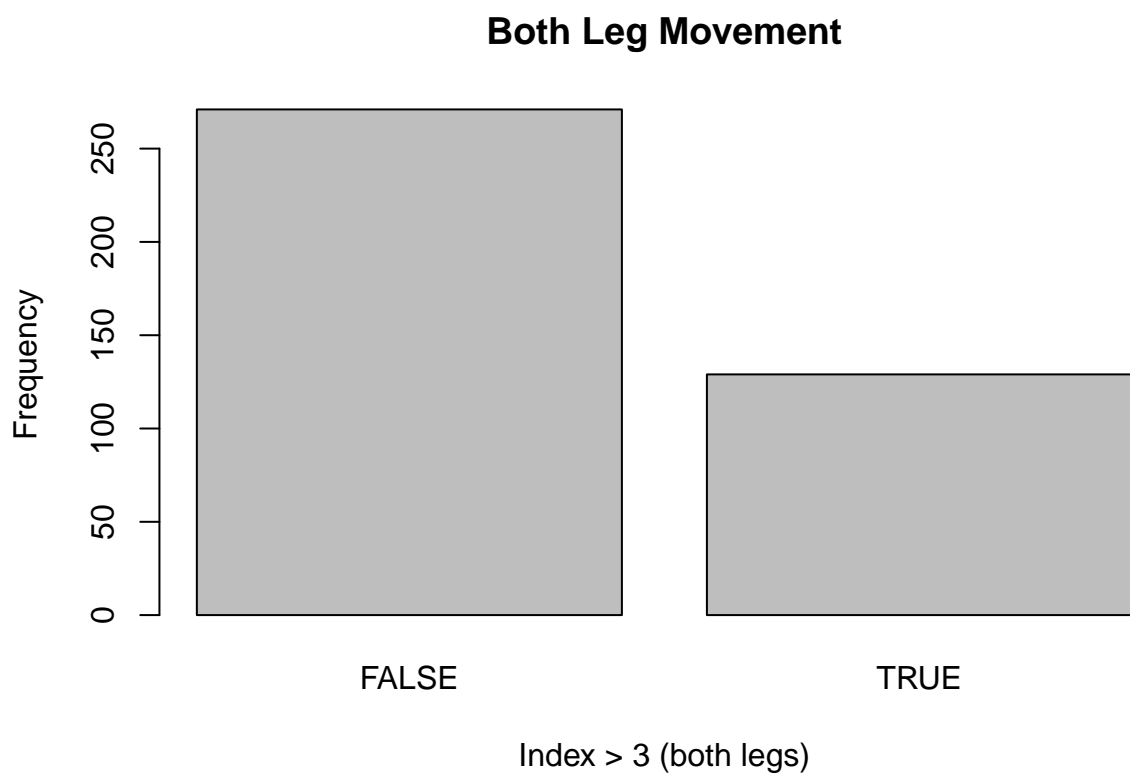
```
barplot(sort(table(data$`LEG1 Movement`),decreasing = T),main="LEG1",xlab="Index > 3",ylab="Frequency")
```



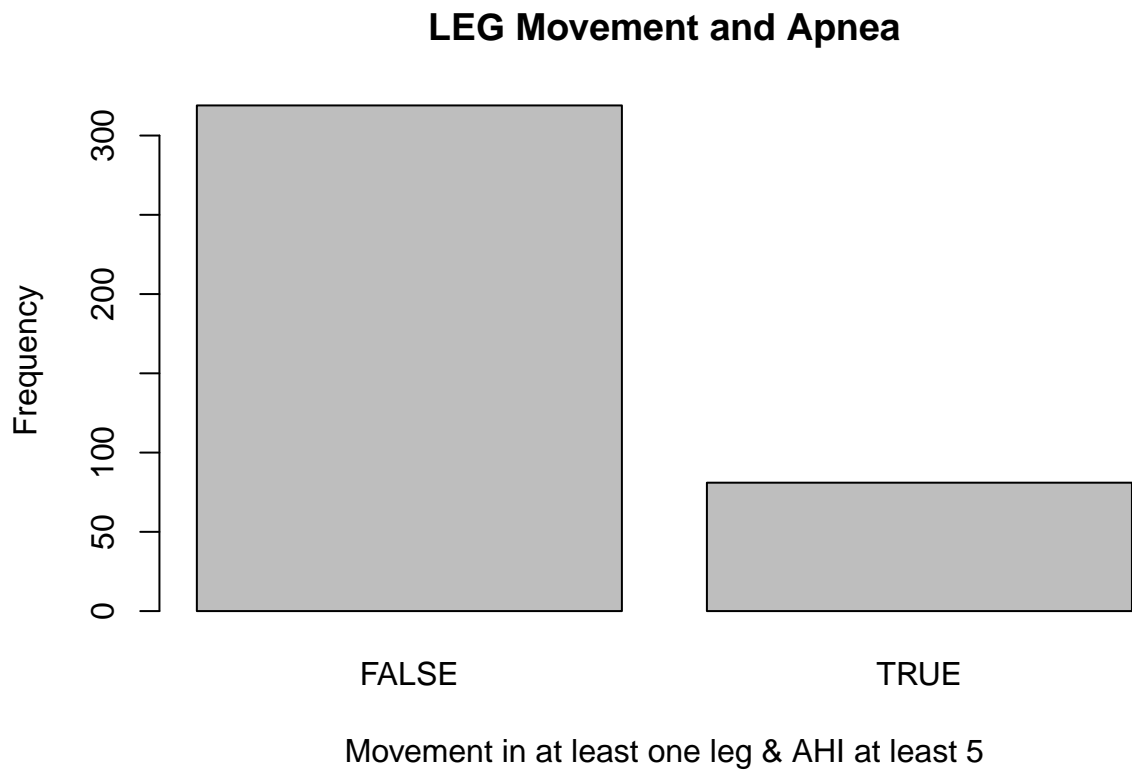
```
barplot(sort(table(data$`LEG2 Movement`),decreasing = T),main="LEG2",xlab="Index > 3",ylab="Frequency")
```



```
barplot(sort(table(data$`Both Leg Movement`),decreasing = T),main="Both Leg Movement",xlab="Index > 3 (
```



```
data <- data %>% mutate(`LEG&AHI`=case_when(AHI>=5 & (`LEG1 Movement` | `LEG2 Movement`)~T, AHI<5 | !(`LEG1 Movement` | `LEG2 Movement`)~F)
barplot(sort(table(data$`LEG&AHI`), decreasing = T), main="LEG Movement and Apnea", xlab="Movement in at least one leg", ylab="Frequency")
```



```
data <- data %>% mutate(LEG=case_when(`Both Leg Movement`==T~"Both Legs",`LEG1 Movement`==T&`LEG2 Movement`==F~"LEG1",`LEG1 Movement`==F&`LEG2 Movement`==T~"LEG2",`LEG1 Movement`==F&`LEG2 Movement`==F~"None"))
barplot(sort(table(data$`Leg&Apnea`),decreasing = T),main="LEG Movement and Apnea",xlab="Movement in at least one leg & AHI at least 5")
```

## LEG Movement and Apnea

