Some Days without Cafeine

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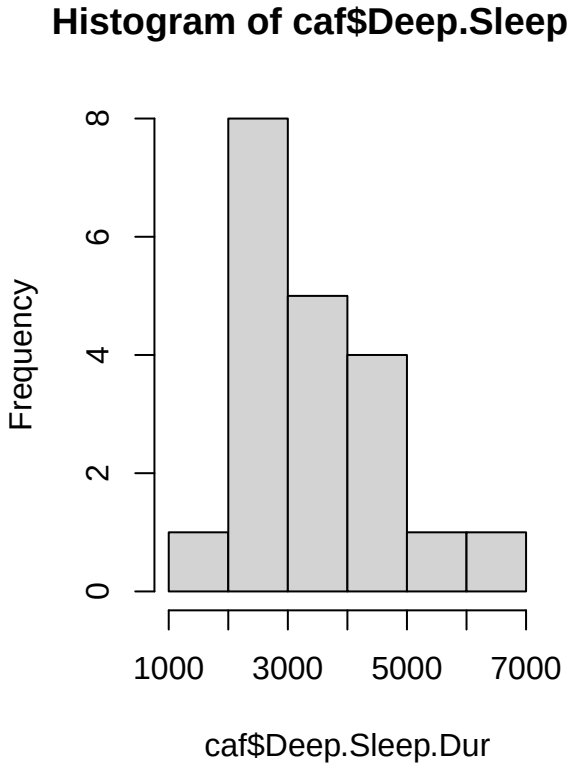
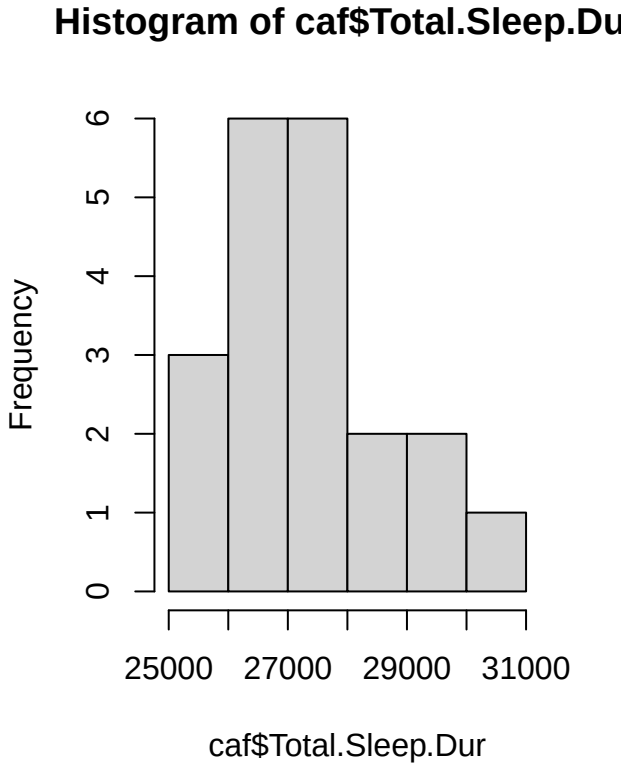
Try to see the influecne of Caffeine on my Sleep

Here are the data

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   7.100   7.290   7.529   7.600   7.790   8.417
```

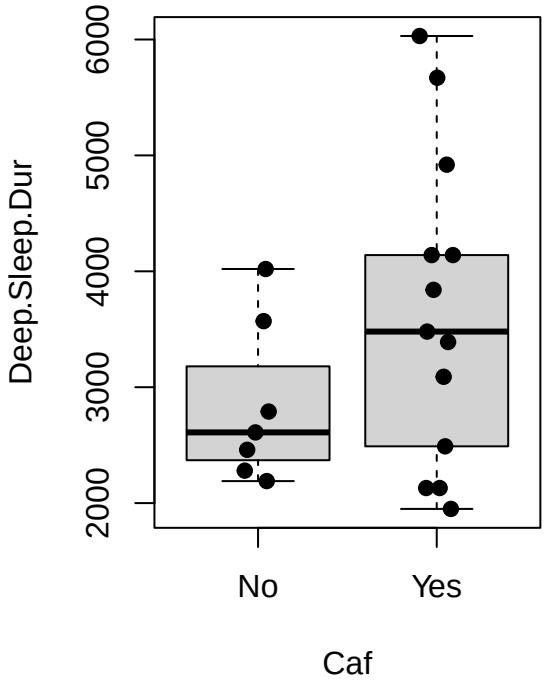
```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.5417  0.6708  0.9000  0.9350  1.1250  1.6750
```

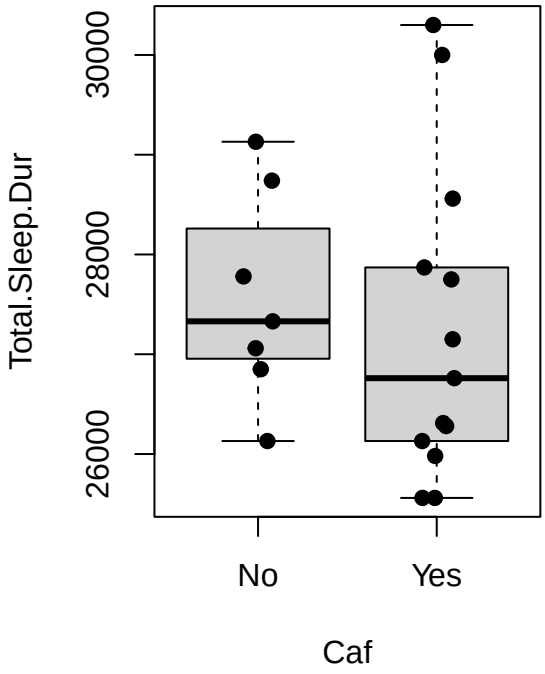


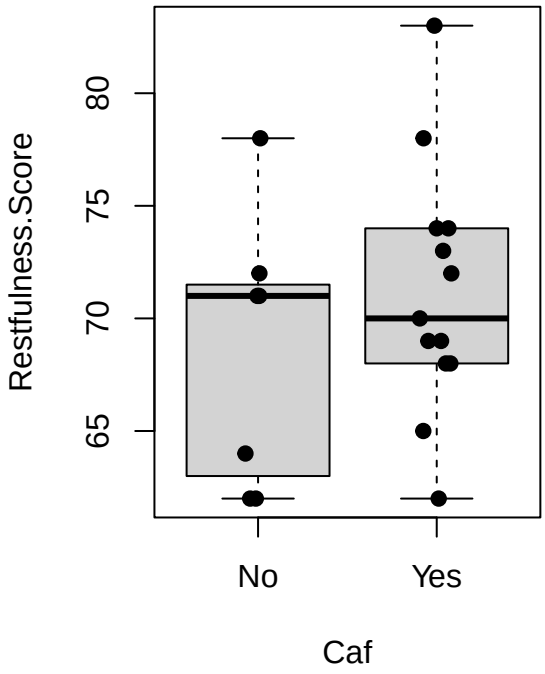


Caf	mean.Deep.Sleep	mean.Total.Sleep	meanLoRHR	mean.AvHRV	mean.Restless.Sleep
No	2845.714	27574.29	46.14286	25	29.71429
Yes	3646.154	27246.92	45.38462	27	26.30769

Visualise the Data







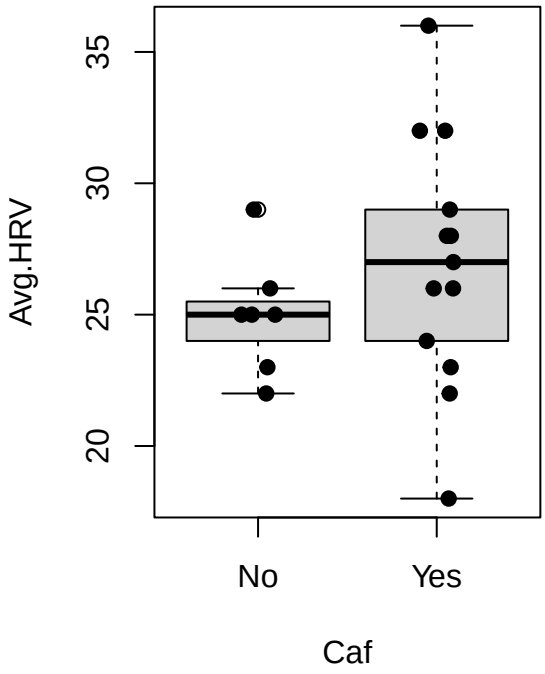


Table 1: Deep Sleep Duration

	less	more
No	5	2
Yes	5	8

Table 2: Total Sleep Duration

	less	more
No	4	3
Yes	8	5

Let's try fisher tests to see if there's a diffeence

- H0: The two variables are independent.
- H1: The two variables relate to each other.

As I don't have enough data for ANOVA, I just look if the parameter is more or less. I look at the Total Sleep, Deep Sleep etc. I drink caffeine only before 12:00 AM I use fisher test as for few data points it is more sensitive as Chi Square

Influence on Deep Sleep Duration

Fisher Test

```
##
##  Fisher's Exact Test for Count Data
##
## data:  tab.Deep.Sleep
## p-value = 0.3498
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##   0.4048219 53.8102540
## sample estimates:
## odds ratio
##   3.718713
```

We can NOT reject H0 - the variables might be independent

Influence Total Sleep Duration

Let's try fisher test for the Total Sleep

```
##
##  Fisher's Exact Test for Count Data
##
## data:  tab.Tot.Sleep
## p-value = 1
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
```

Table 3: Restfulness.Score

	less	more
No	3	4
Yes	7	6

```
##  0.09150944 8.32976971
## sample estimates:
## odds ratio
##  0.8410212
```

We can NOT reject H0 - the variables might be independent

Influence on the Sleep Resfullness

Let's try fisher test

```
##
##  Fisher's Exact Test for Count Data
##
## data:  tab.Restlessness
## p-value = 1
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.06659951 5.77551545
## sample estimates:
## odds ratio
##  0.6573128
```

We can NOT reject H0 - the variables might be independent