For my final project I will be comparing the number of jobs to blood pressure levels. I am interested to know if having multiple jobs increases someones risk of having elevated blood pressure levels which would lower their health status.

```
load("addhealth_clean.Rdata")
dim(addhealth)
```

```
## [1] 6504  992
```

```
table(addhealth$H4LM3)
```

```
##
##    0    1    2    3    4    5    6    7    8    9   10   11   12   13   15   16
##   54  889 1138 1090  685  481  255  138   75   40   93    8   18    2   14    2
##   18   20   22   23   25   30   50
##    2   16    2    1    2    3    3
```

```
table(addhealth$H4BPCLS)
```

```
##
##    1    2    3    4
## 1718 2269  791  205
```

```
addhealth$H4BPCLS[addhealth$H4BPCLS %in% c(6, 7, 9)] <- NA
addhealth$bp_class <- factor(addhealth$H4BPCLS, labels = c('Normal', 'Pre-HTN', 'HTN-I', 'HTN-II'))
table(addhealth$H4BPCLS, addhealth$bp_class, useNA="always")
```

```
##
##         Normal Pre-HTN HTN-I HTN-II <NA>
##    1      1718       0     0      0    0
##    2         0    2269     0      0    0
##    3         0       0   791      0    0
##    4         0       0     0    205    0
##    <NA>      0       0     0      0 1521
```

My first table I was able to organize people by the amount of jobs they had held in their life time. The second table I looked at peoples blood pressure levels. I organized the information into columns that categorized people as Normal, pre Hypertension, Hypertension I, and Hypertension II

```
library(dplyr)
```
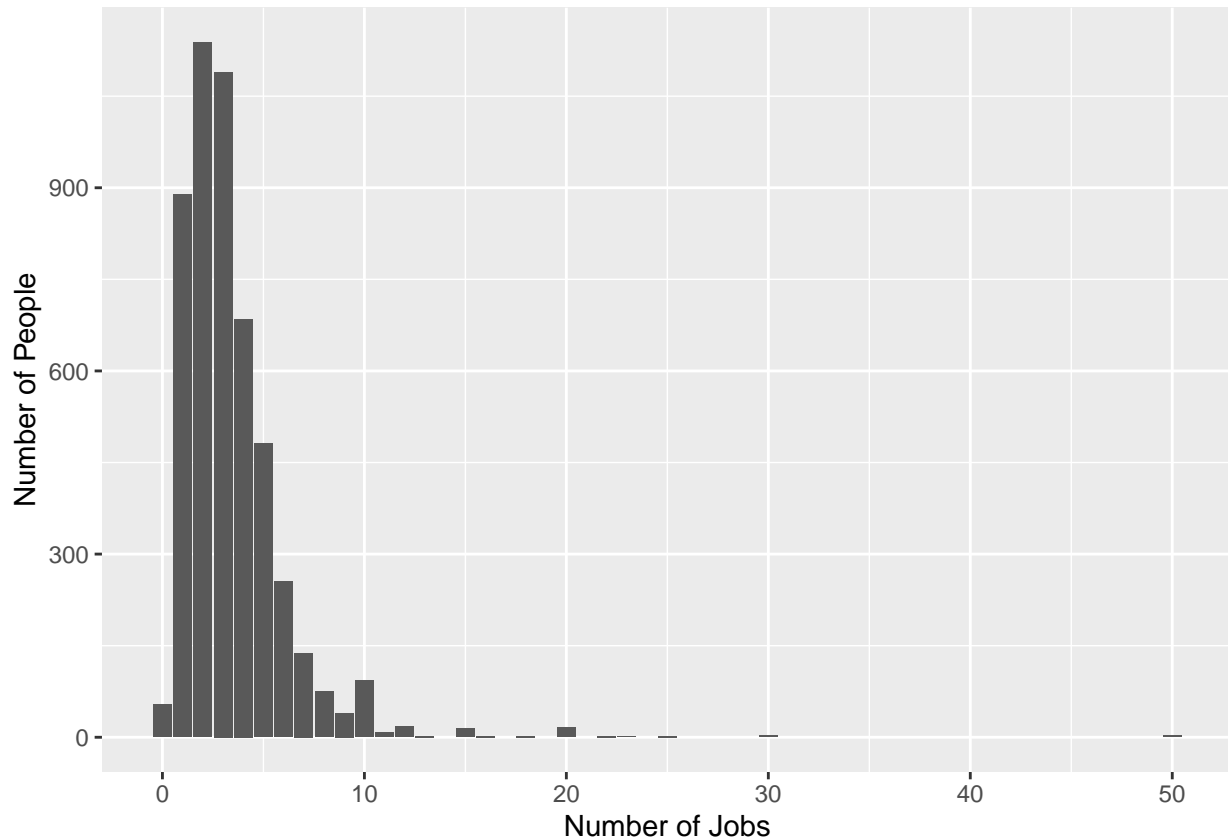
```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(ggplot2)
library (RColorBrewer)
```

```
ggplot(addhealth, aes(x=H4LM3)) + geom_bar() + ylab("Number of People")+
xlab("Number of Jobs")
```

```
## Warning: Removed 1493 rows containing non-finite values (stat_count).
```


The first graph I used a bargraph with the number of jobs a person may have had up until they were surveyed in the x-axis and they number of people that were identified as having x amount of jobs.

```
ggplot(addhealth, aes(x=bp_class)) + geom_bar() + ylab("Number of People")+
xlab("Levels")
```
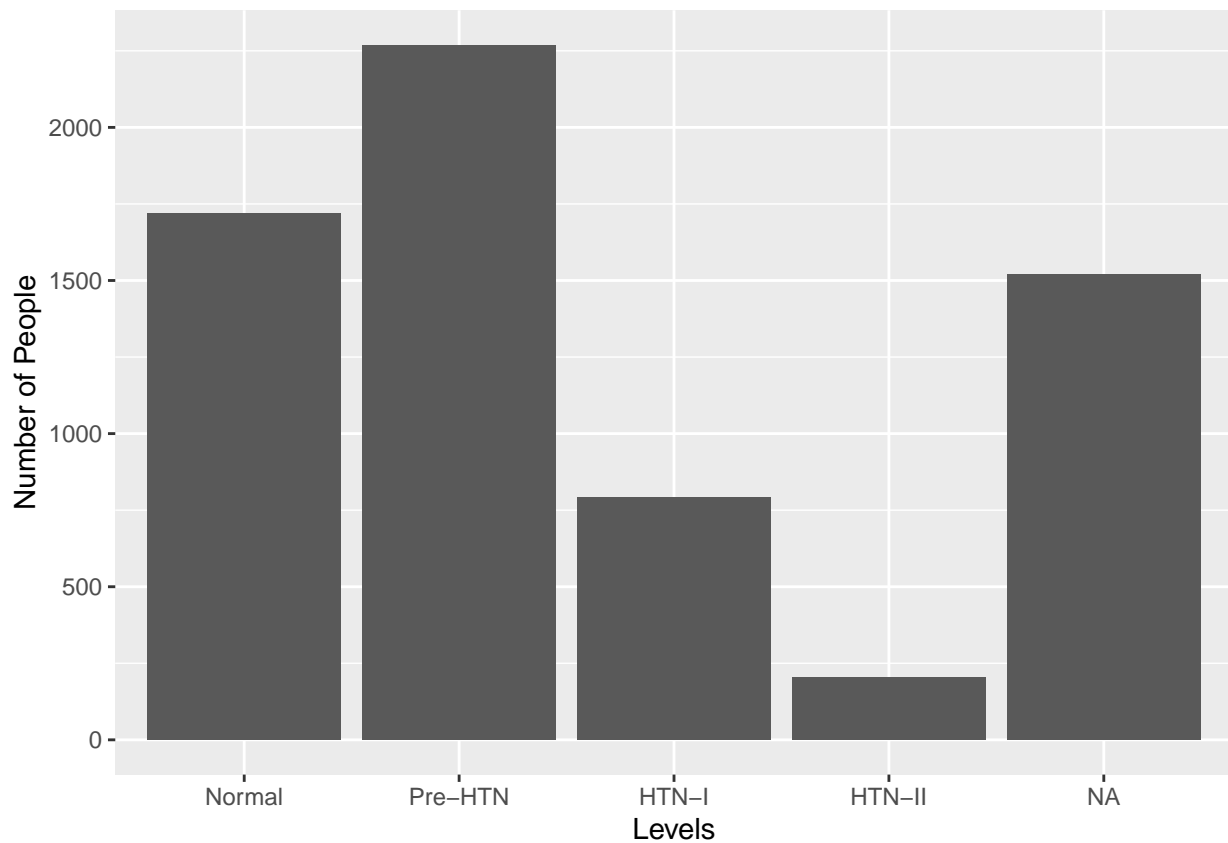
I compared the number of people who were in the specific ranges of blood pressure levels.

```
table(addhealth$H4LM3, addhealth$bp_class)
```

```
##
##      Normal Pre-HTN HTN-I HTN-II
##   0      17      22    10      3
##   1     283     394   147     42
##   2     403     477   190     40
##   3     370     491   166     43
##   4     224     299   110     28
##   5     176     213    62     16
##   6      74     134    36      6
##   7      44      64    19      7
##   8      30      27    10      6
##   9      10      24     5      1
##   10     24      44    15      6
##   11      1       5     1      0
##   12      8       7     2      1
##   13      2       0     0      0
##   15      4       7     3      0
##   16      1       1     0      0
##   18      0       1     0      0
##   20      5       9     2      0
##   22      2       0     0      0
##   23      0       0     1      0
##   25      0       2     0      0
##   30      1       0     1      1
```

```
## 50      1       2    0    0
```
```
table(addhealth$H4LM3, addhealth$bp_class) %>% prop.table(margin=2) %>% round(3)
```

```
## 
## 
##      Normal Pre-HTN HTN-I HTN-II
##  0    0.010   0.010 0.013  0.015
##  1    0.168   0.177 0.188  0.210
##  2    0.240   0.215 0.244  0.200
##  3    0.220   0.221 0.213  0.215
##  4    0.133   0.135 0.141  0.140
##  5    0.105   0.096 0.079  0.080
##  6    0.044   0.060 0.046  0.030
##  7    0.026   0.029 0.024  0.035
##  8    0.018   0.012 0.013  0.030
##  9    0.006   0.011 0.006  0.005
##  10   0.014   0.020 0.019  0.030
##  11   0.001   0.002 0.001  0.000
##  12   0.005   0.003 0.003  0.005
##  13   0.001   0.000 0.000  0.000
##  15   0.002   0.003 0.004  0.000
##  16   0.001   0.000 0.000  0.000
##  18   0.000   0.000 0.000  0.000
##  20   0.003   0.004 0.003  0.000
##  22   0.001   0.000 0.000  0.000
##  23   0.000   0.000 0.001  0.000
##  25   0.000   0.001 0.000  0.000
##  30   0.001   0.000 0.001  0.005
##  50   0.001   0.001 0.000  0.000
```
```
ggplot(addhealth, aes(x=H4LM3, fill=bp_class)) + geom_bar()+ylab("Number of People")+
xlab("Number of Jobs")
```

```
## Warning: Removed 1493 rows containing non-finite values (stat_count).
```
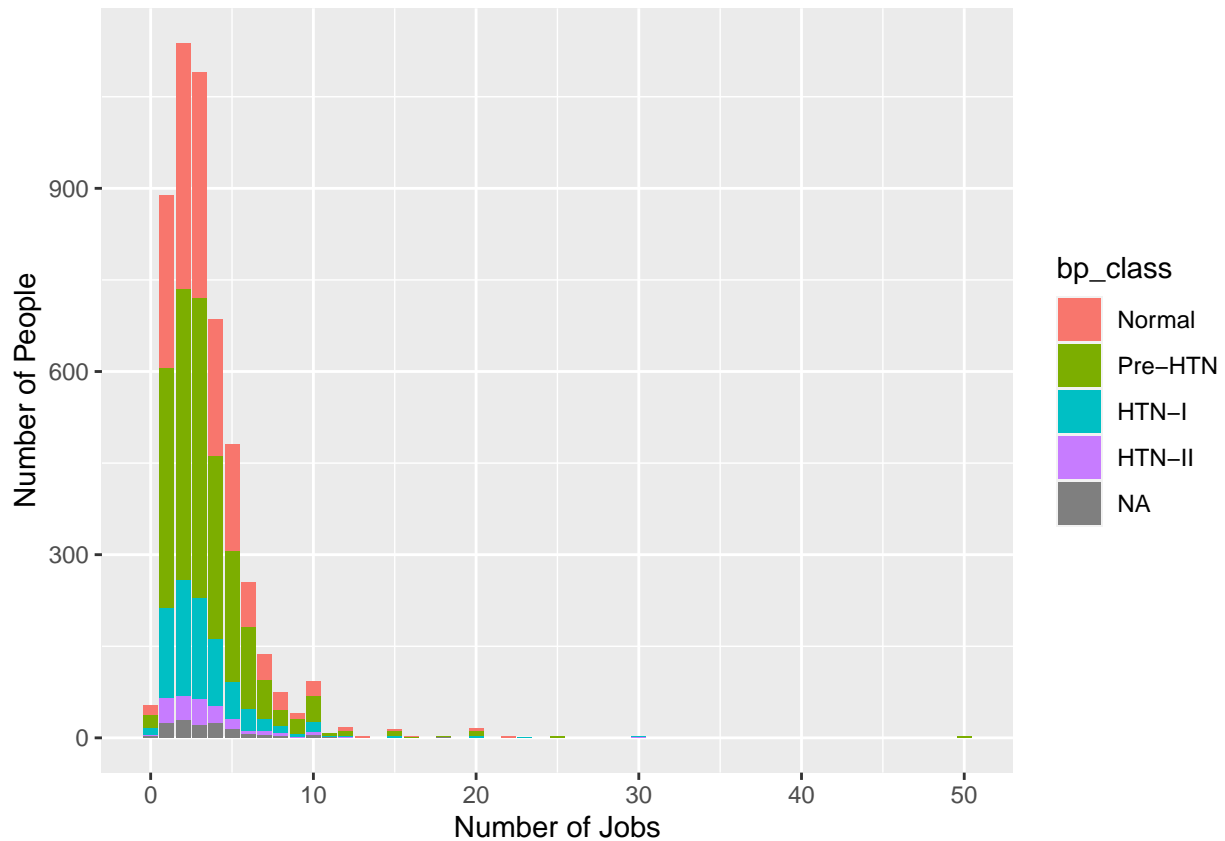
The number of Jobs is on the x-axis and the number of people with that quantity of job is on the y-axis. Furthermore, each quantity of jobs is subdivided by blood pressure levels.

In conclusion, it seems as though people with 1-3 jobs have higher levels of hypertension. This could be due to the stress of the environment or possibly not being able to find another job. There is significantly less data for people who have had over 5-10 jobs, but they do have lower blood pressure levels. As for the reason I would need to do further comparisons. I really assumed that more jobs would mean more stress and this just proved the opposite.