

Exploratory Data Analysis Project

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Introduction

My data set comes from a study of adult Los Angeles residents which measured the amount of days the individuals felt depressed while considering factors like gender, marital status, religion, income & more. My goal for this project is to discover if gender has an association with depression.

```
library(ggplot2)
library(RColorBrewer)
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
knitr::opts_chunk$set(fig.width=6, fig.height=4)
depress <- read.table("/Users/erinrobins/Desktop/Depression.txt", header=TRUE, sep="\t")
```

Univariate Data

Gender (SEX)

There are 111 male and 183 female participants in the study as shown by the table and bar chart below.

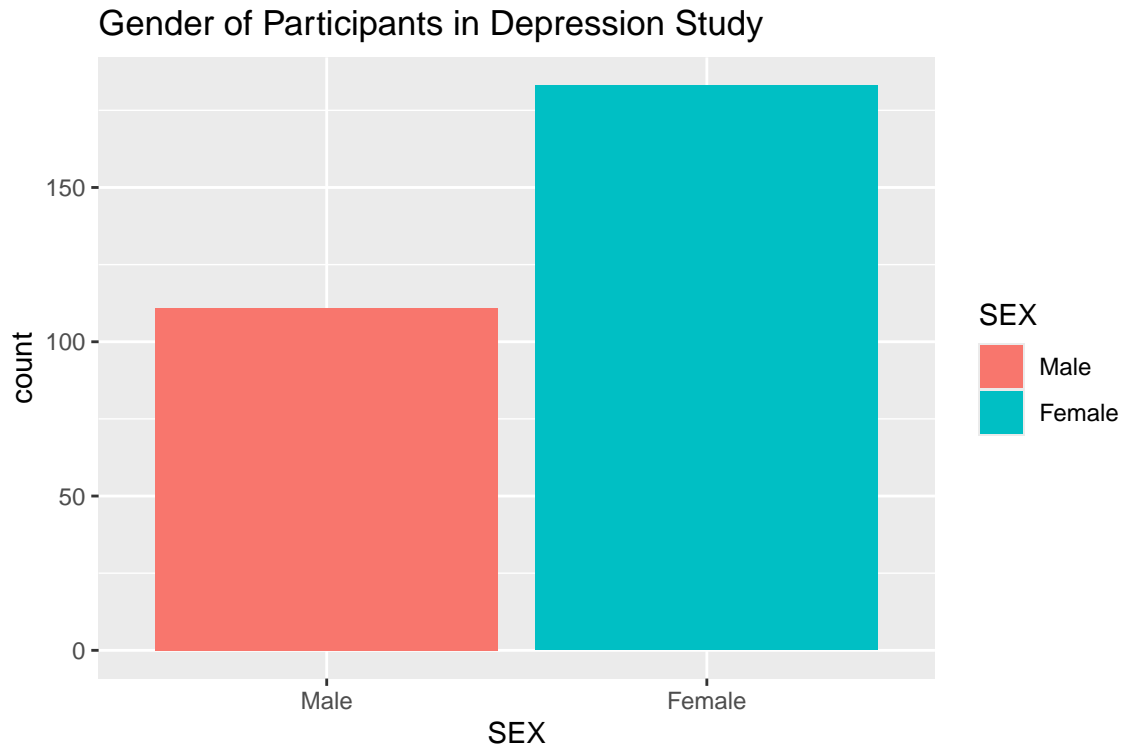
Table

```
depress$SEX <- factor(depress$SEX, labels = c("Male", "Female"))
table(depress$SEX)
```

```
##
##   Male Female
##   111   183
```

Bar chart

```
ggplot(depress, aes(x=SEX, fill=SEX)) + geom_bar() + ggtitle("Gender of Participants in Depression Study")
```



Depression (CASES)

Out of all the participants, 244 individuals felt normal while 50 individuals felt depressed as shown by the table and bar chart below.

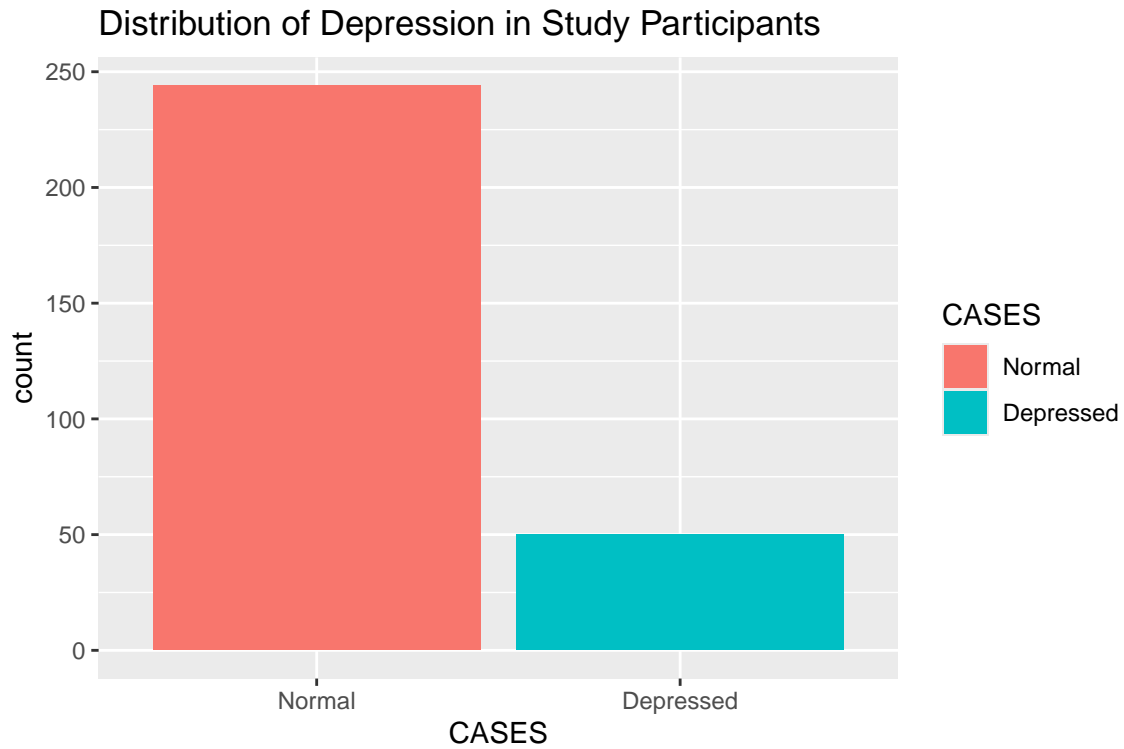
Table

```
depress$CASES <- factor(depress$CASES, labels = c("Normal", "Depressed"))
table(depress$CASES)
```

```
##
##   Normal Depressed
##     244         50
```

Bar Chart

```
ggplot(depress, aes(x=CASES, fill=CASES)) + geom_bar() + ggtitle("Distribution of Depression in Study P")
```



Bivariate Data

Out of all male participants, 91% felt normal and 9% felt depressed. Out of all female participants, 78% felt normal and 22% felt depressed. This is shown by the table and bar chart below.

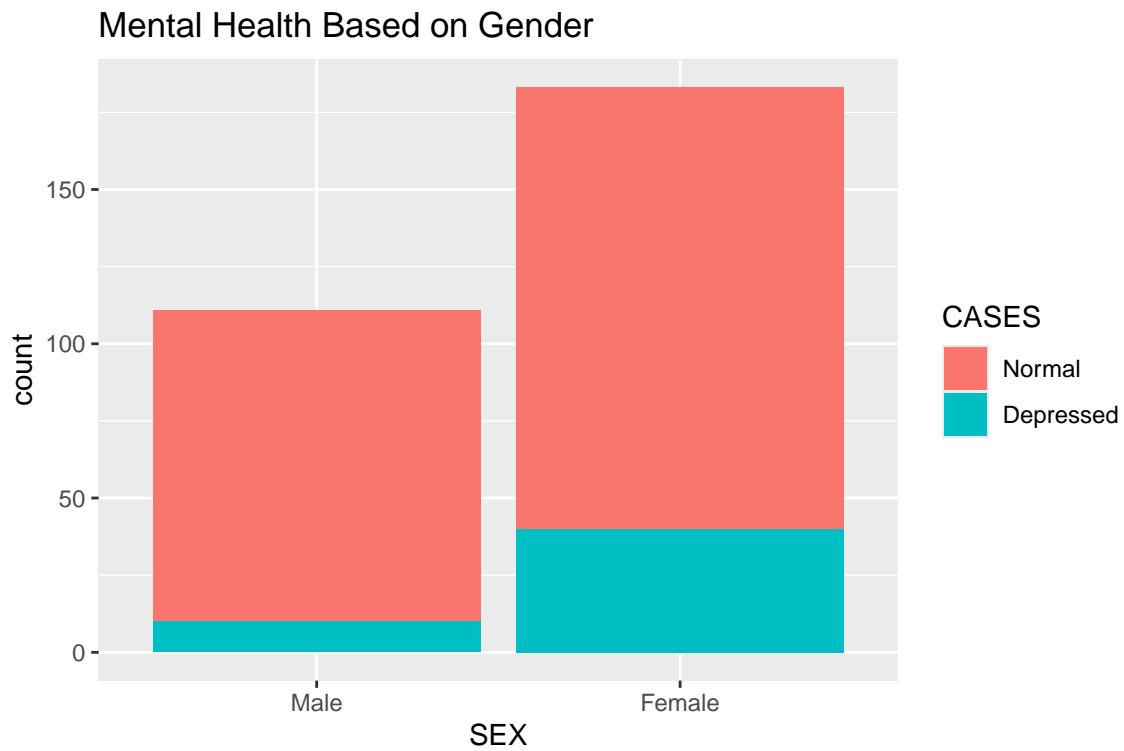
Table

```
table(depress$SEX, depress$CASES) %>% prop.table(margin=1)
```

```
##
##           Normal Depressed
## Male    0.90990991 0.09009009
## Female  0.78142077 0.21857923
```

Bar Chart

```
ggplot(depress, aes(x=SEX, fill=CASES)) + geom_bar() + ggtitle("Mental Health Based on Gender")
```



Conclusion

In conclusion, I found that gender may have an association with depression. Out of all the participants, only 9% of males were found to be depressed while 22% of females were found to be depressed. This means that females may be more likely to have depression or depressive symptoms than males.