Final Project Data Visualization

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Importing dataset and packages

```
asmr <- read.csv("C:\\Users\\khayd\\Documents\\FALL 2020 Files\\STAT 1601\\Datasets\\ASMR_data2.csv")
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
```

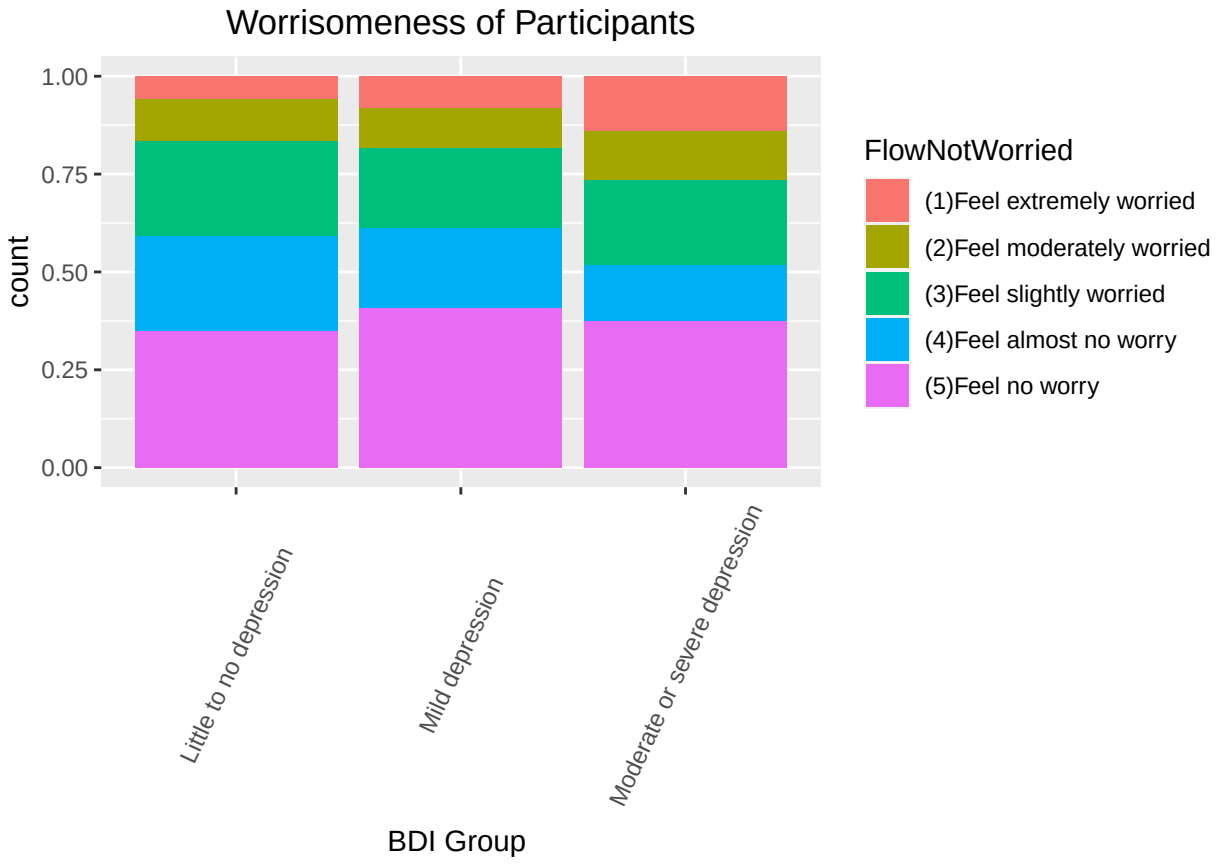
```
library(ggplot2)
library(RColorBrewer)
library(ggwordcloud)
```

```
## Warning: package 'ggwordcloud' was built under R version 4.0.3
```

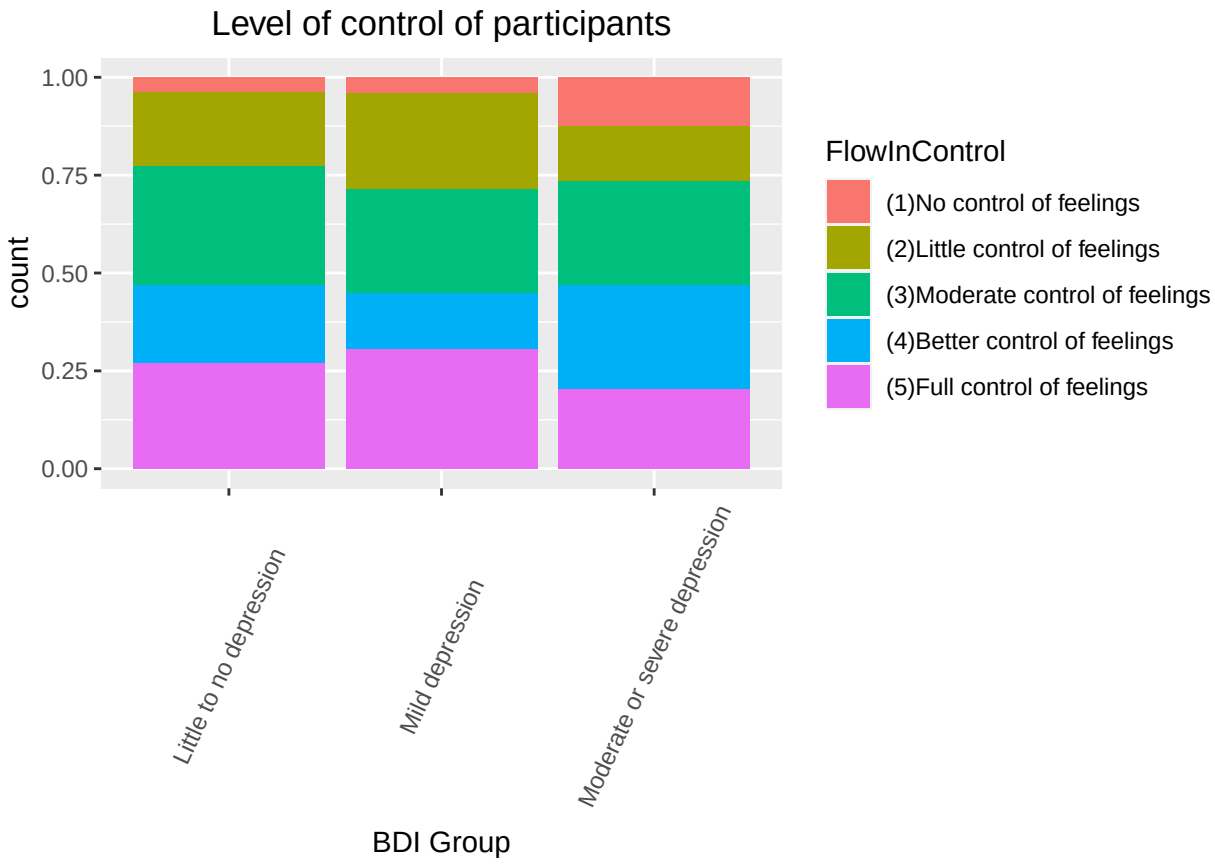
Stacked bar graphs

```
asmr3 <-asmr%>%
  mutate(FlowNotWorried =
           ifelse(FlowNotWorried == 1, "(1)Feel extremely worried",
           ifelse(FlowNotWorried == 2, "(2)Feel moderately worried",
           ifelse(FlowNotWorried == 3, "(3)Feel slightly worried",
           ifelse(FlowNotWorried == 4, "(4)Feel almost no worry",
           ifelse(FlowNotWorried == 5,"(5)Feel no worry", NA)))),
         FlowInControl =
           ifelse(FlowInControl == 1, "(1)No control of feelings",
           ifelse(FlowInControl == 2, "(2)Little control of feelings",
           ifelse(FlowInControl == 3, "(3)Moderate control of feelings",
```

```
          ifelse(FlowInControl == 4, "(4)Better control of feelings",
          ifelse(FlowInControl ==5,"(5)Full control of feelings", NA))))))%>%
  filter(!is.na(FlowNotWorried), !is.na(FlowInControl))

ggplot(asmr3, aes(x=BDI_group, fill=FlowNotWorried))+
  geom_bar(position = "fill")+
  theme(axis.text.x = element_text(angle = 65, vjust = 0.5),plot.title = element_text(hjust = 0.5), axis
  labs(x = "BDI Group ", title = "Worrisomeness of Participants")
```

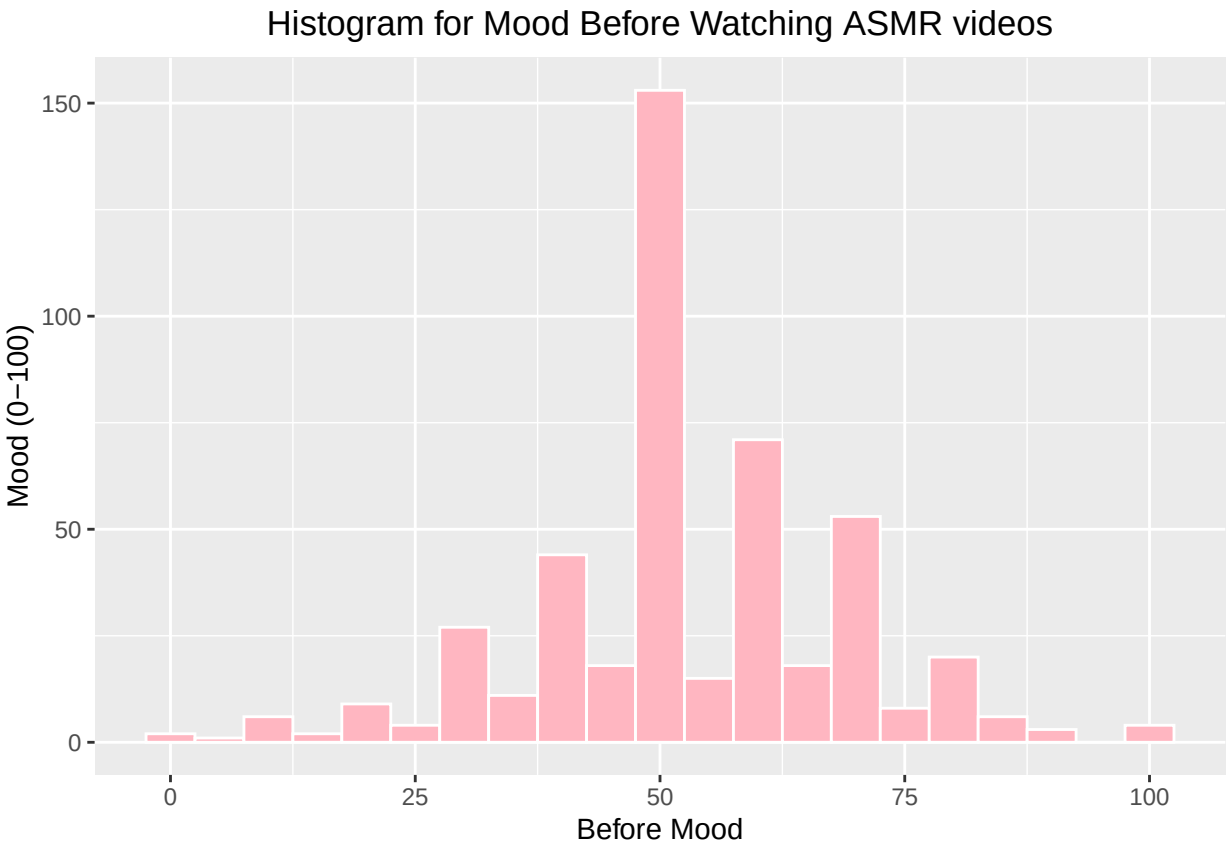



```
ggplot(asmr3, aes(x=BDI_group, fill=FlowInControl))+
  geom_bar(position = "fill")+
  theme(axis.text.x = element_text(angle = 65, vjust = 0.5),plot.title = element_text(hjust = 0.5), axis
  labs(x = "BDI Group", title = "Level of control of participants")
```

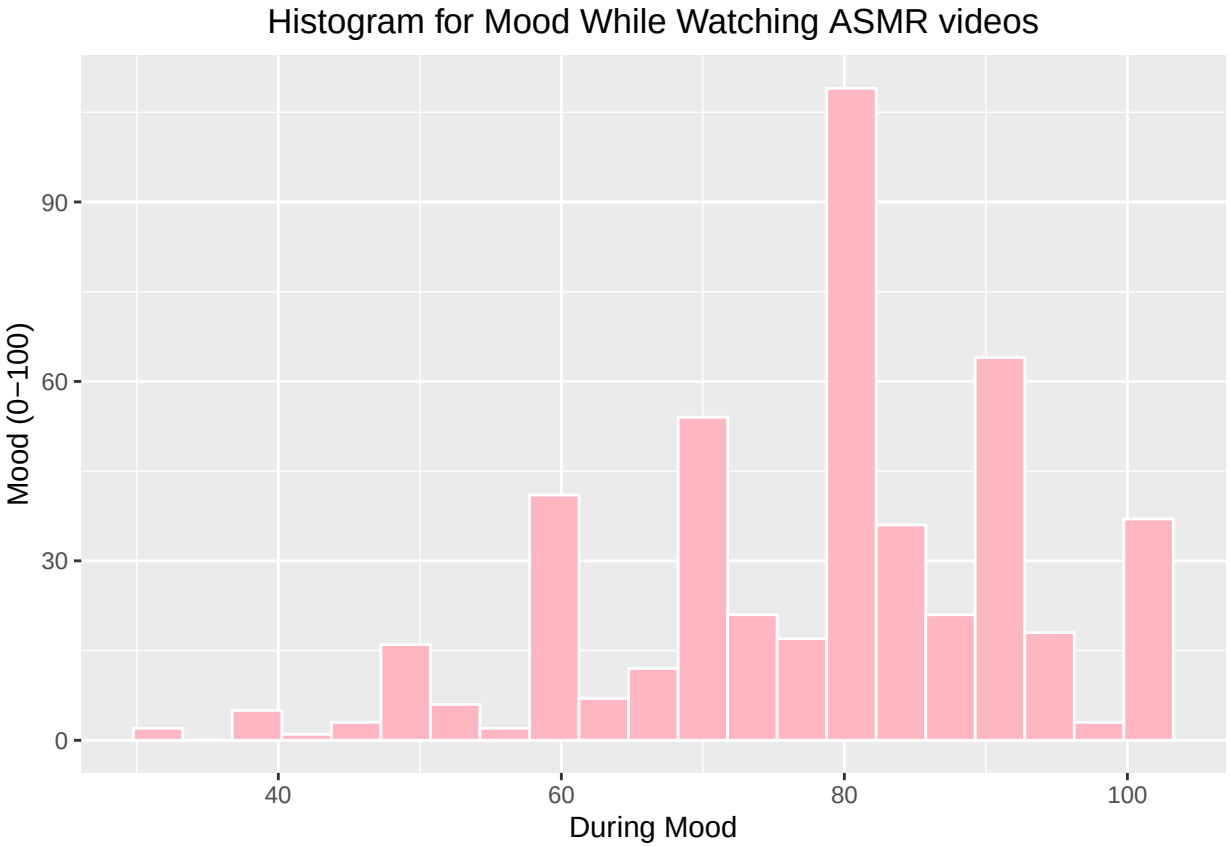


Histograms of The Mood of Participants

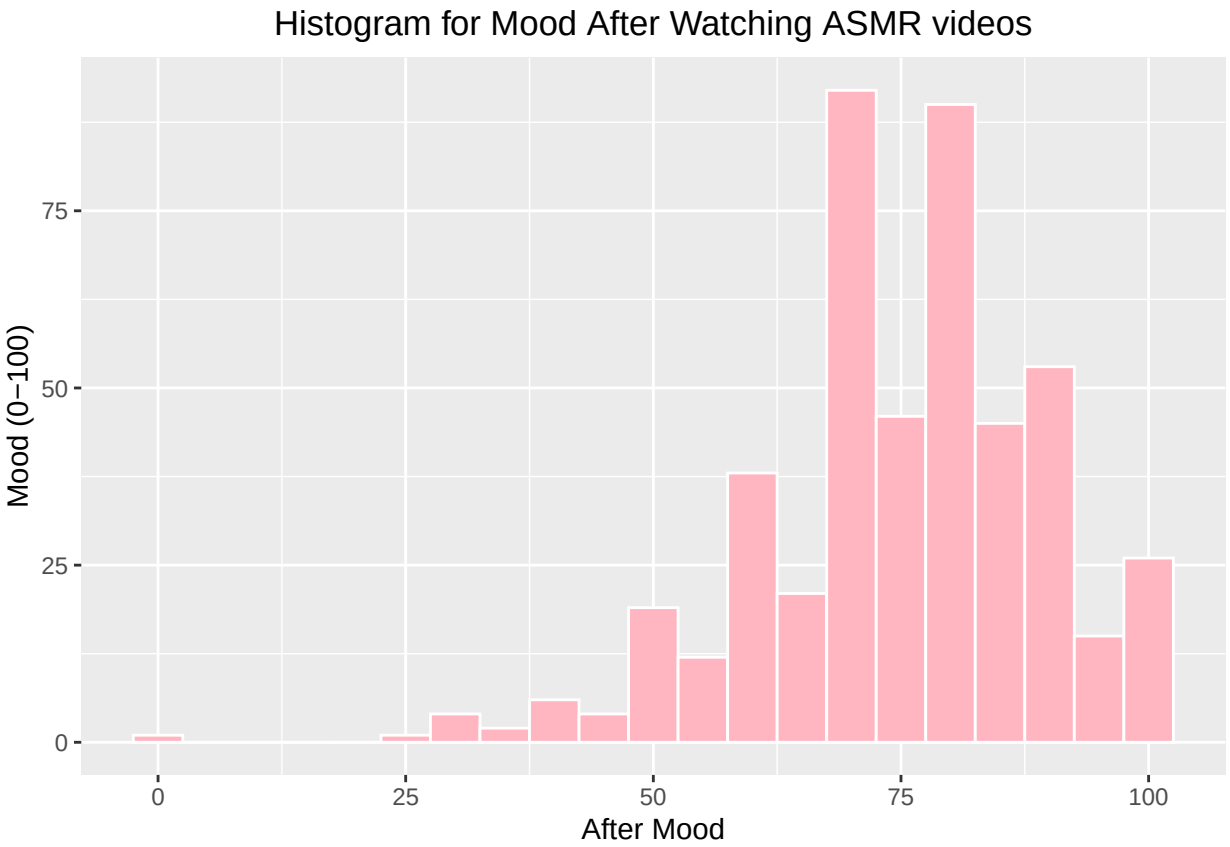
```
ggplot(asmr, aes(x=Mood_Before_watch))+
  geom_histogram(bins = sqrt(nrow(asmr)), fill="lightpink", color="white")+
  labs(y = "Mood (0-100)", title = "Histogram for Mood Before Watching ASMR videos", x = "Before Mood")+
  theme(plot.title = element_text(hjust = 0.5))
```



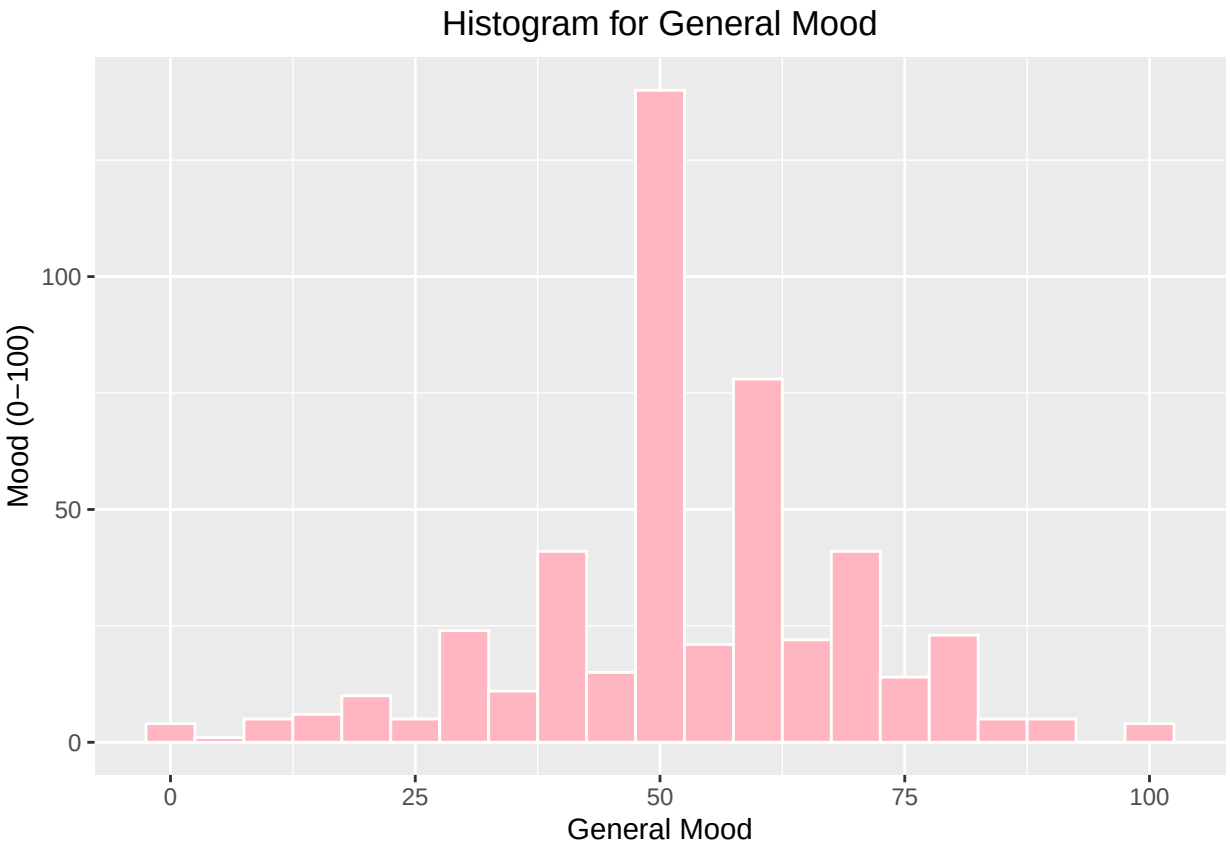

```
ggplot(asmr, aes(x=Mood_During_Watch))+
  geom_histogram(bins = sqrt(nrow(asmr)), fill="lightpink", color="white")+
  labs(y = "Mood (0-100)", title = "Histogram for Mood While Watching ASMR videos", x = "During Mood")+
  theme(plot.title = element_text(hjust = 0.5))
```




```
ggplot(asmr, aes(x=Mood_After_watch))+
  geom_histogram(bins = sqrt(nrow(asmr)), fill="lightpink", color="white")+
  labs(y = "Mood (0-100)", title = "Histogram for Mood After Watching ASMR videos", x = "After Mood")+
  theme(plot.title = element_text(hjust = 0.5))
```

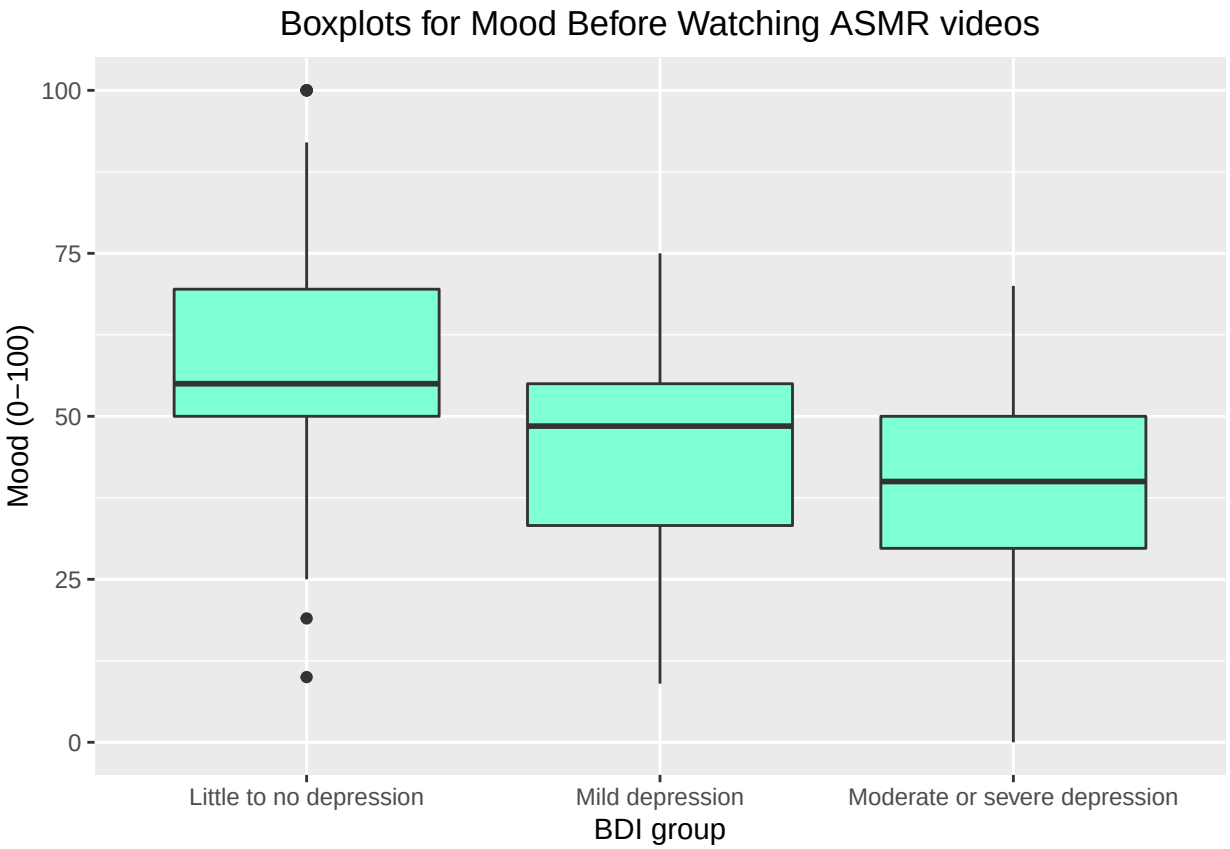



```
ggplot(asmr, aes(x=Mood_Daily))+
  geom_histogram(bins = sqrt(nrow(asmr)), fill="lightpink", color="white")+
  labs(y = "Mood (0-100)", title = "Histogram for General Mood", x = "General Mood")+
  theme(plot.title = element_text(hjust = 0.5))
```

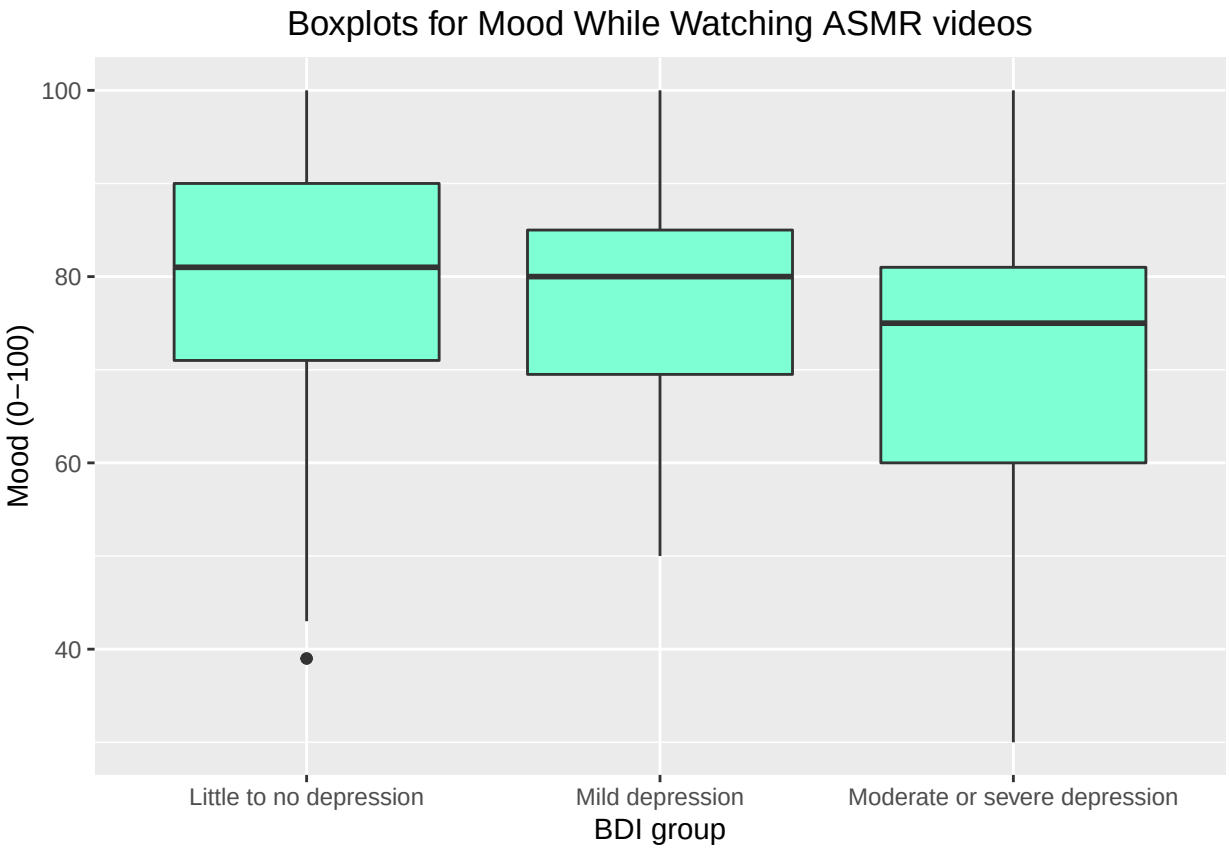


Side-by-side boxplots of Mood of Participants grouped by BDI_group

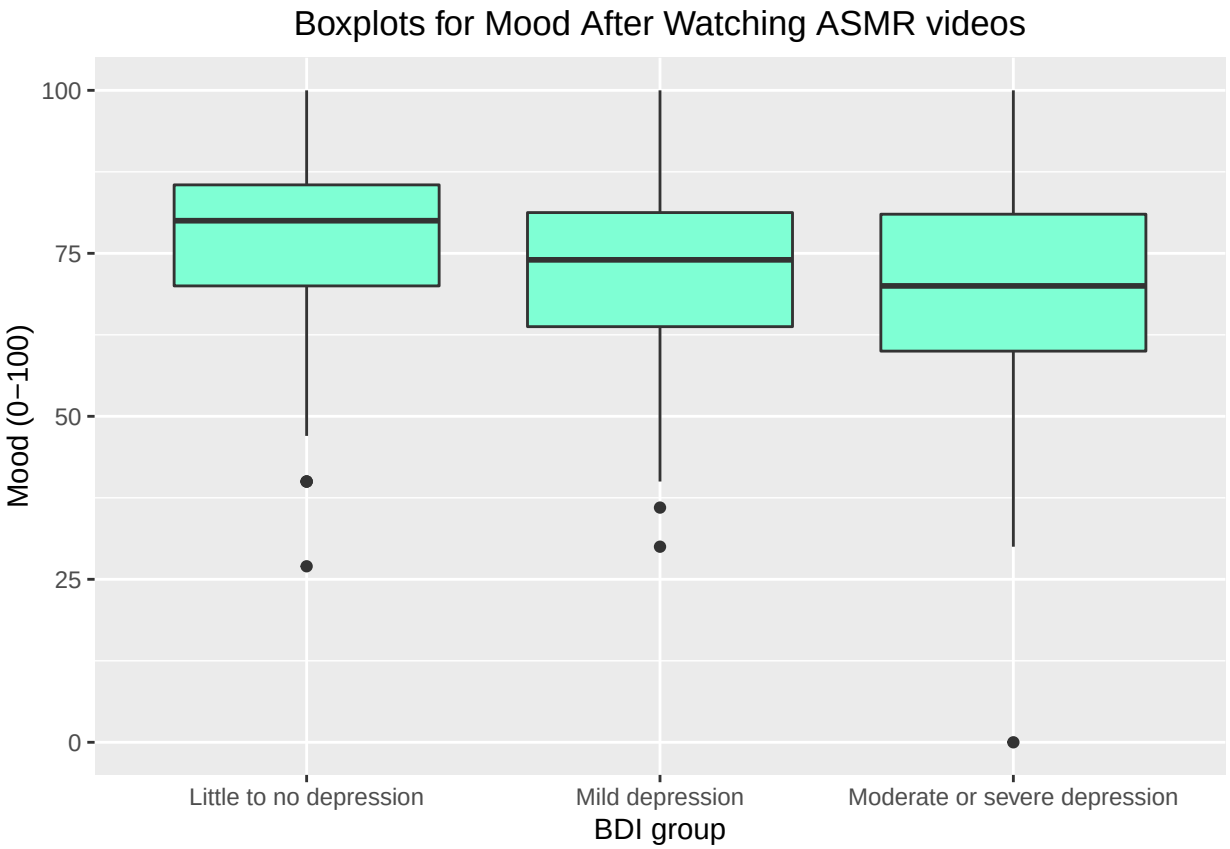
```
ggplot(asmr, aes(x = BDI_group,y=Mood_Before_watch))+
  geom_boxplot(fill="aquamarine")+
  labs(y = "Mood (0-100)", title = "Boxplots for Mood Before Watching ASMR videos", x = "BDI group")+
  theme(plot.title = element_text(hjust = 0.5))
```



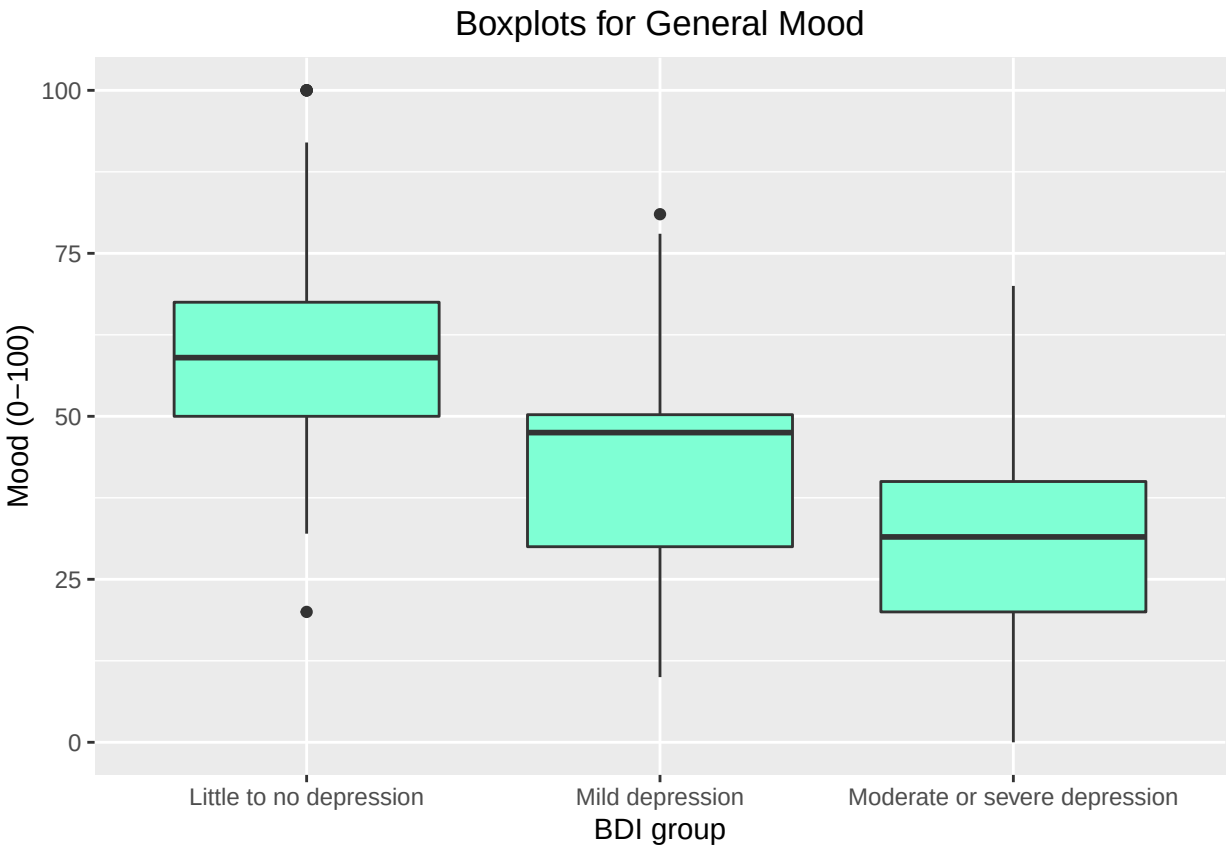

```
ggplot(asmr, aes(x = BDI_group,y=Mood_During_Watch))+
  geom_boxplot(fill="aquamarine")+
  labs(y = "Mood (0-100)", title = "Boxplots for Mood While Watching ASMR videos", x = "BDI group")+
  theme(plot.title = element_text(hjust = 0.5))
```




```
ggplot(asmr, aes(x = BDI_group,y=Mood_After_watch))+
  geom_boxplot(fill="aquamarine")+
  labs(y = "Mood (0-100)", title = "Boxplots for Mood After Watching ASMR videos", x = "BDI group")+
  theme(plot.title = element_text(hjust = 0.5))
```



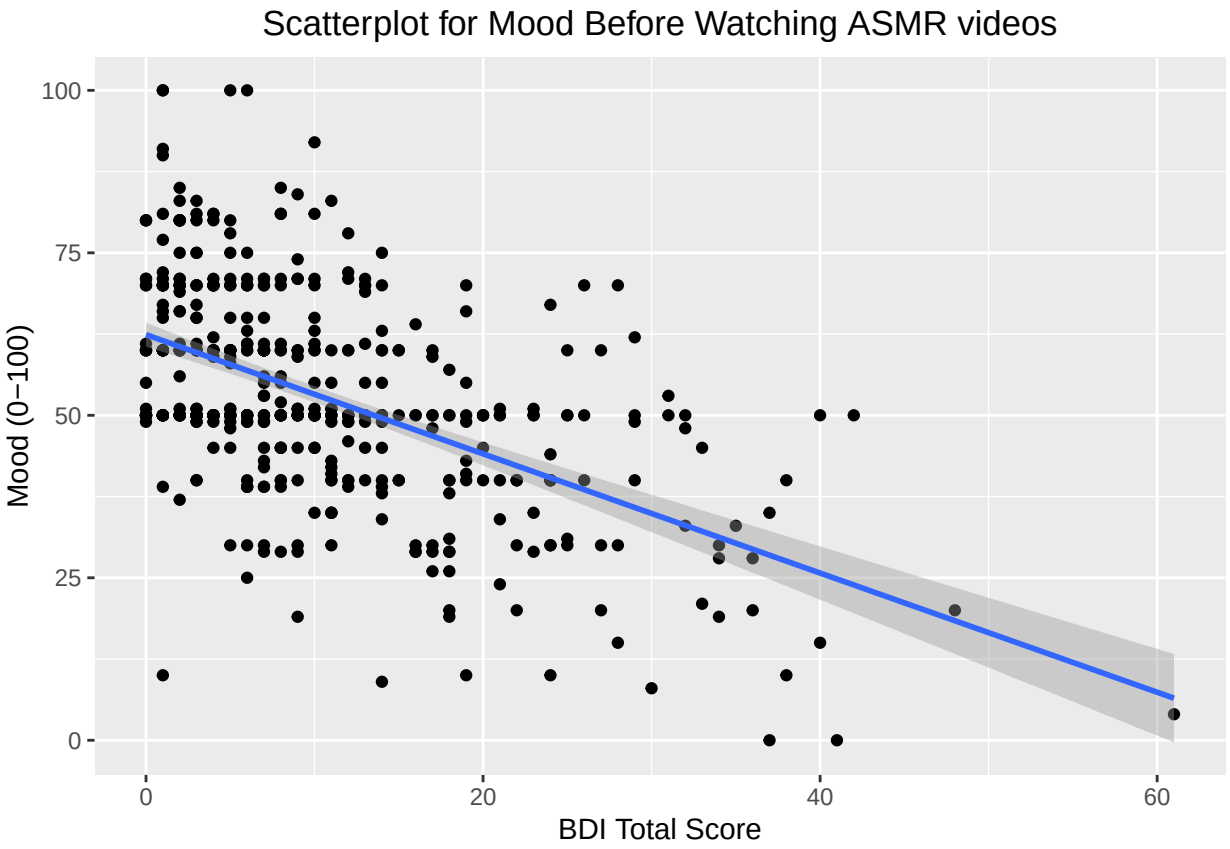

```
ggplot(asmr, aes(x = BDI_group,y=Mood_Daily))+
  geom_boxplot(fill="aquamarine")+
  labs(y = "Mood (0-100)", title = "Boxplots for General Mood", x = "BDI group")+
  theme(plot.title = element_text(hjust = 0.5))
```



Scatterplots of BDI_TOTAL score and Mood of Participants

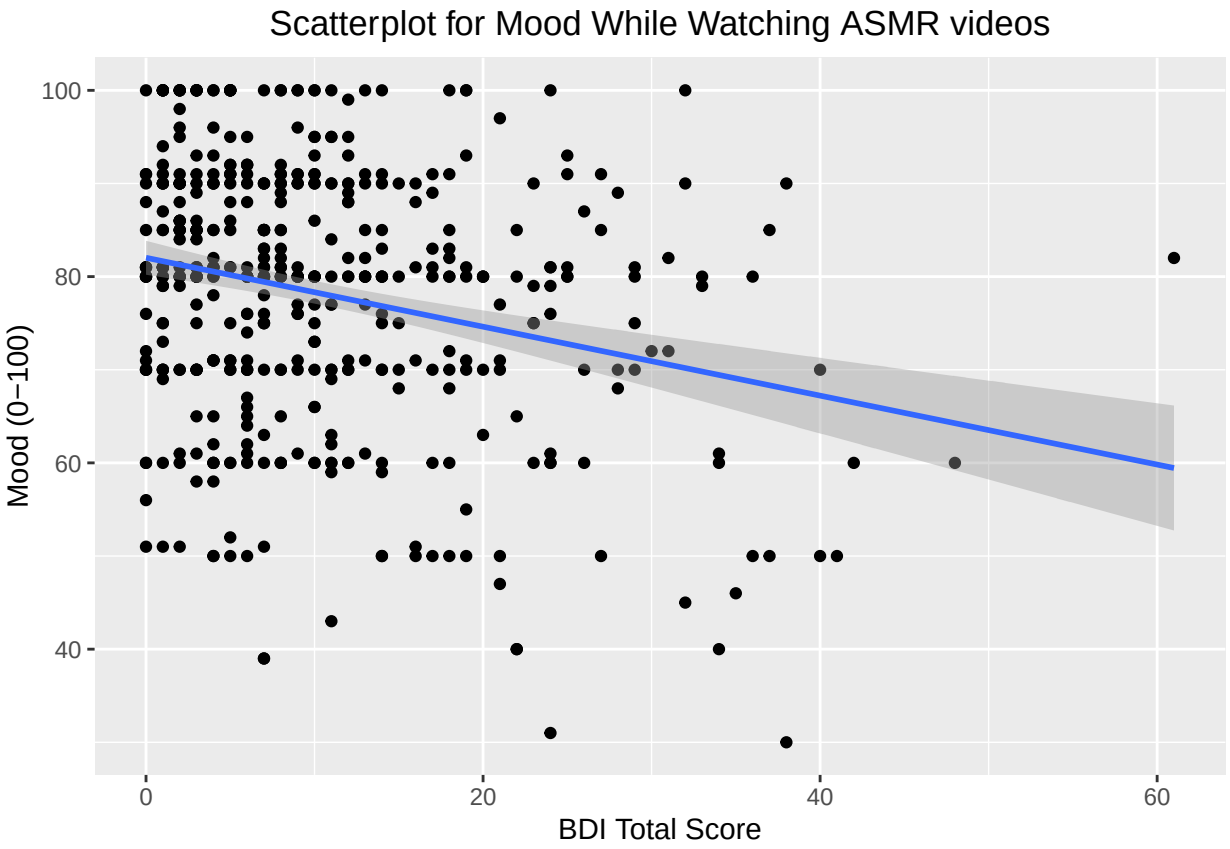
```
ggplot(asmr, aes(x = BDI_TOTAL, y = Mood_Before_watch))+
  geom_point()+
  geom_smooth(method = "lm")+
  labs(y = "Mood (0-100)", title = "Scatterplot for Mood Before Watching ASMR videos", x = "BDI Total S
  theme(plot.title = element_text(hjust = 0.5))
```

```
## `geom_smooth()` using formula 'y ~ x'
```



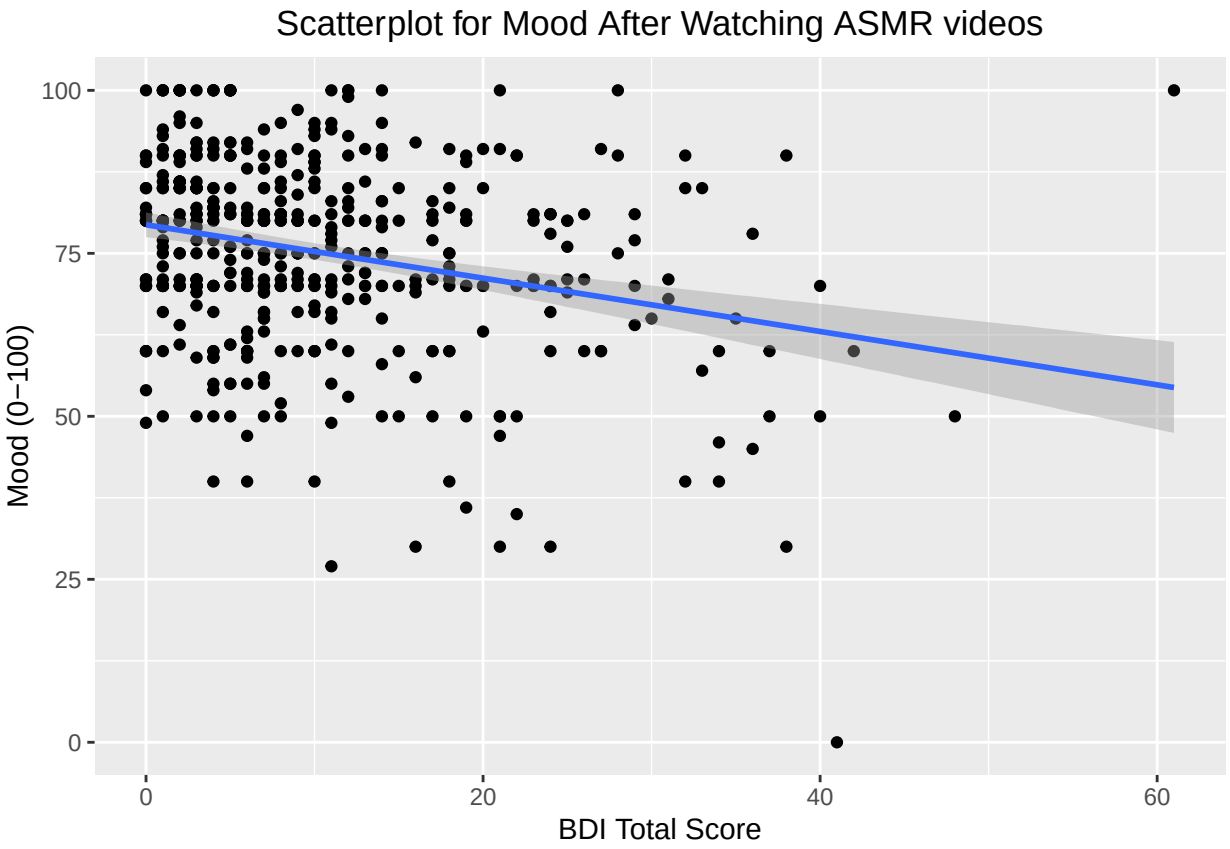

```
ggplot(asmr, aes(x = BDI_TOTAL, y = Mood_During_Watch))+
  geom_point()+
  geom_smooth(method = "lm")+
  labs(y = "Mood (0-100)", title = "Scatterplot for Mood While Watching ASMR videos", x = "BDI Total Sc
  theme(plot.title = element_text(hjust = 0.5))
```

```
## `geom_smooth()` using formula 'y ~ x'
```



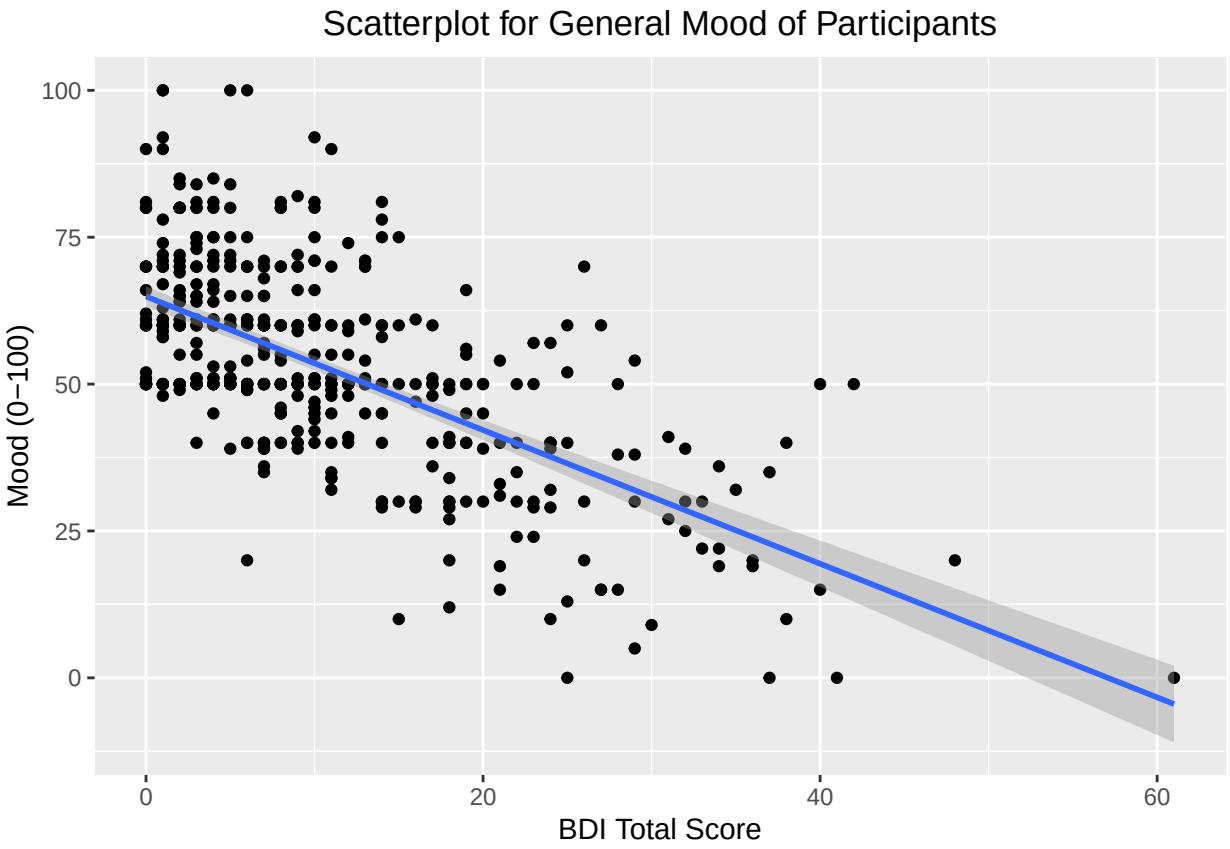

```
ggplot(asmr, aes(x = BDI_TOTAL, y = Mood_After_watch))+
  geom_point()+
  geom_smooth(method = "lm")+
  labs(y = "Mood (0-100)", title = "Scatterplot for Mood After Watching ASMR videos", x = "BDI Total Sc
  theme(plot.title = element_text(hjust = 0.5))
```

```
## `geom_smooth()` using formula 'y ~ x'
```




```
ggplot(asmr, aes(x = BDI_TOTAL, y = Mood_Daily))+
  geom_point()+
  geom_smooth(method = "lm")+
  labs(y = "Mood (0-100)", title = "Scatterplot for General Mood of Participants", x = "BDI Total Score
  theme(plot.title = element_text(hjust = 0.5))
```

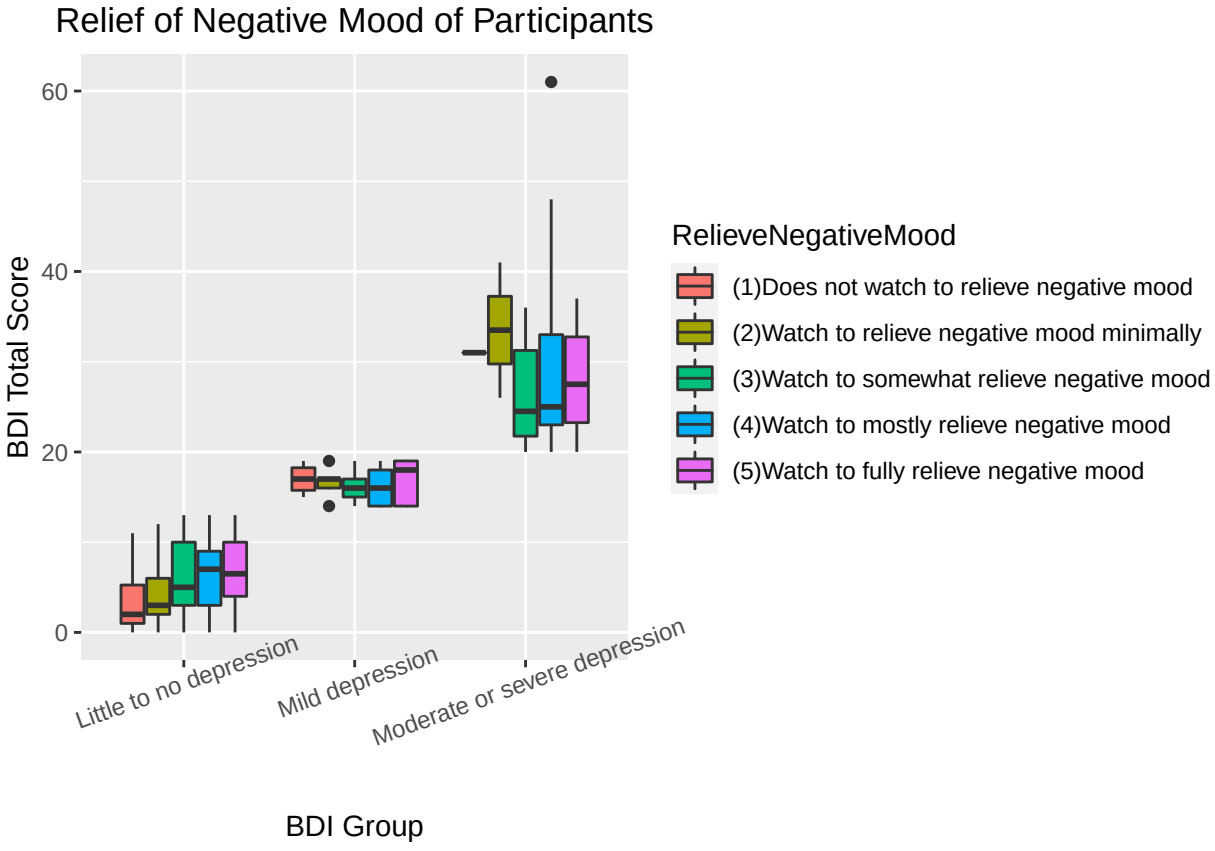
```
## `geom_smooth()` using formula 'y ~ x'
```



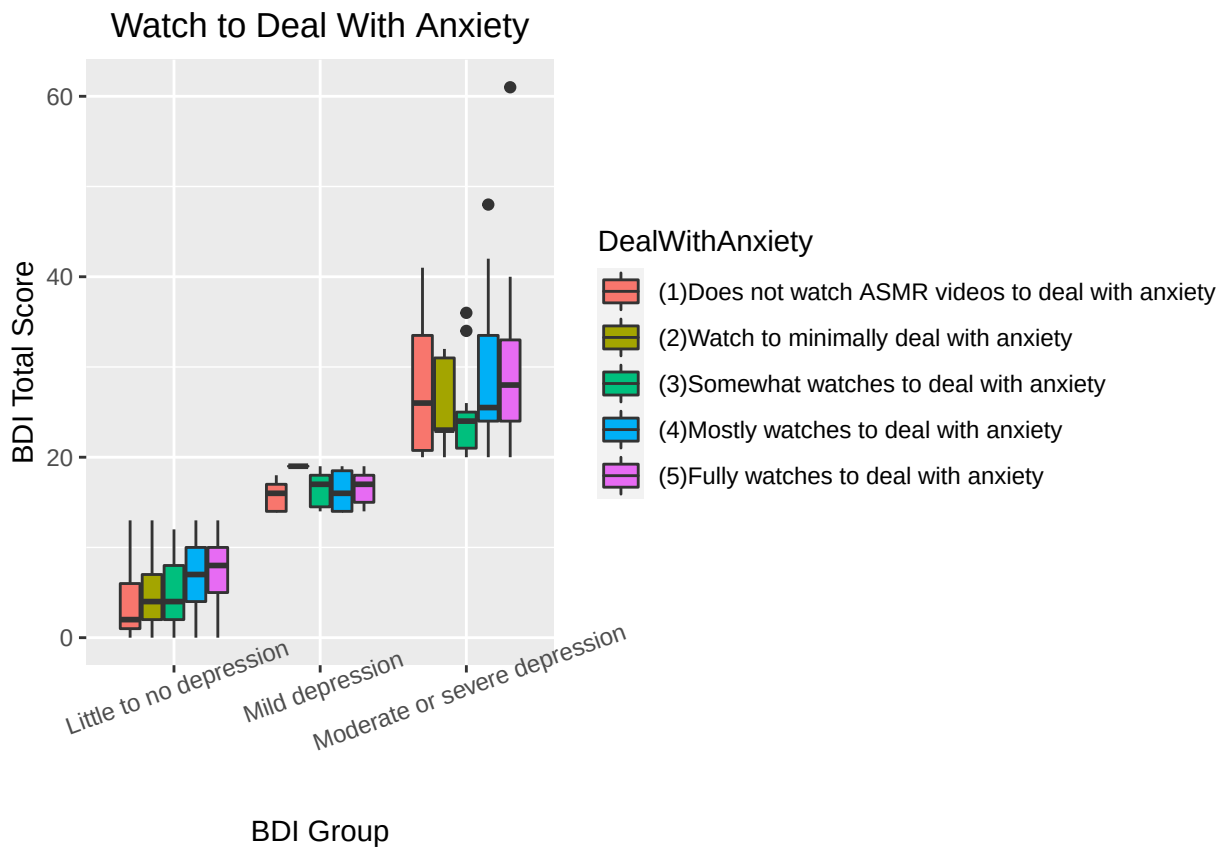
Side-by-side boxplots of three key categorical variables

```
asmr3 <-asmr%>%
  mutate(RelieveNegativeMood =
        ifelse(RelieveNegativeMood==1, "(1)Does not watch to relieve negative mood",
        ifelse(RelieveNegativeMood==2, "(2)Watch to relieve negative mood minimally",
        ifelse(RelieveNegativeMood==3, "(3)Watch to somewhat relieve negative mood",
        ifelse(RelieveNegativeMood==4, "(4)Watch to mostly relieve negative mood",
        ifelse(RelieveNegativeMood==5, "(5)Watch to fully relieve negative mood", NA)))),
        DealWithAnxiety =
        ifelse(DealWithAnxiety==1, "(1)Does not watch ASMR videos to deal with anxiety",
        ifelse(DealWithAnxiety==2, "(2)Watch to minimally deal with anxiety",
        ifelse(DealWithAnxiety==3, "(3)Somewhat watches to deal with anxiety",
        ifelse(DealWithAnxiety==4, "(4)Mostly watches to deal with anxiety",
        ifelse(DealWithAnxiety==5, "(5)Fully watches to deal with anxiety", NA)))),
        DealWithStress =
        ifelse(DealWithStress==1, "(1)Does not watch ASMR videos to deal with stress",
        ifelse(DealWithStress==2, "(2)Watch to minimally deal with stress",
        ifelse(DealWithStress==3, "(3)Somewhat watches to deal with stress",
        ifelse(DealWithStress==4, "(4)Mostly watches to deal with stress",
        ifelse(DealWithStress==5, "(5)Fully watches to deal with stress", NA)))),
        WatchToDealWithDepression=
        ifelse(WatchToDealWithDepression==1, "(1)Does not watch ASMR videos to deal with depression",
```

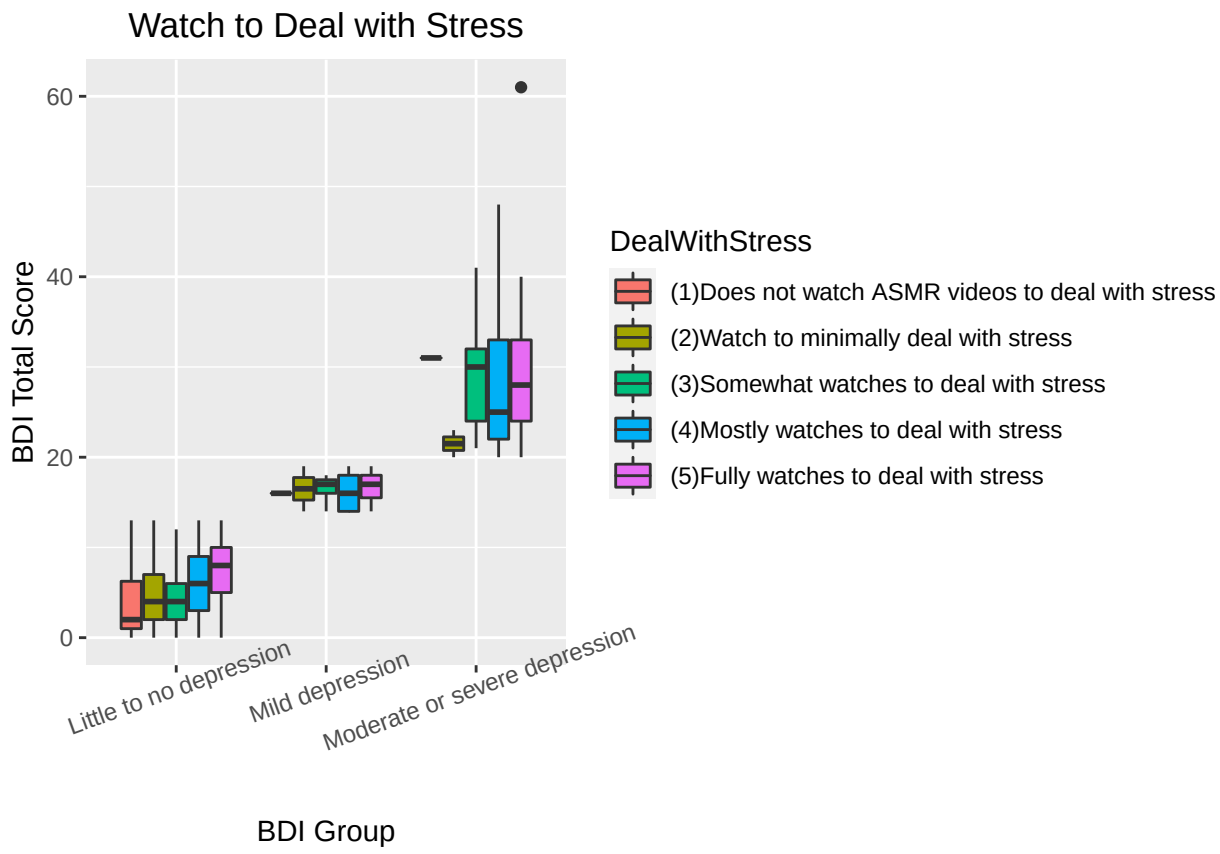
```
        ifelse(WatchToDealWithDepression==2, "(2)Watch to minimally deal with depression",
        ifelse(WatchToDealWithDepression==3, "(3)Somewhat watches to deal with depression",
        ifelse(WatchToDealWithDepression==4, "(4)Mostly watches to deal with depression",
        ifelse(WatchToDealWithDepression==5, "(5)Fully watches to deal with depression", NA)))),
        HelpMeSleep =
        ifelse(HelpMeSleep==1, "(1)Does not watch ASMR videos to help with sleep",
        ifelse(HelpMeSleep==2, "(2)Watch to minimally help with sleep",
        ifelse(HelpMeSleep==3, "(3)Somewhat watches to help with sleep",
        ifelse(HelpMeSleep==4, "(4)Mostly watches to help with sleep",
        ifelse(HelpMeSleep==5, "(5)Fully watches to help with sleep", NA))))))%>%
  filter(!is.na(RelieveNegativeMood), !is.na(EnjoyASMRvideos), !is.na(WatchToRelax), !is.na(DealWithAnx
         !is.na(DealWithStress), !is.na(WatchToDealWithDepression), !is.na(HelpMeSleep))


ggplot(asmr3, aes(x = BDI_group, y=BDI_TOTAL, fill = RelieveNegativeMood))+
  geom_boxplot()+
  theme(axis.text.x = element_text(angle = 20, vjust = 1),plot.title = element_text(hjust = 0.5), axis.
  labs(x = "BDI Group", title = "Relief of Negative Mood of Participants", y = "BDI Total Score")
```



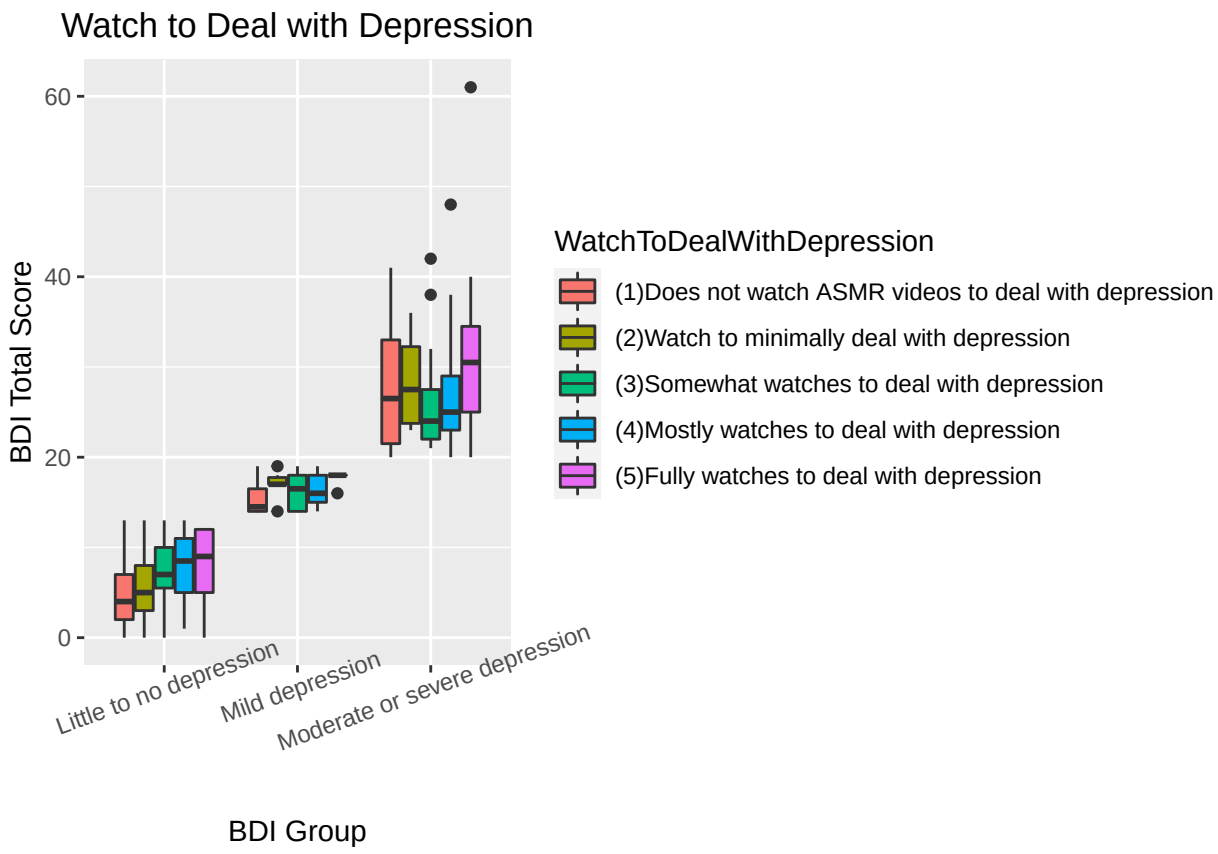

```
ggplot(asmr3, aes(x = BDI_group, y=BDI_TOTAL, fill = DealWithAnxiety))+
  geom_boxplot()+
  theme(axis.text.x = element_text(angle = 20, vjust = 1),plot.title = element_text(hjust = 0.5), axis.
  labs(x = "BDI Group", title = "Watch to Deal With Anxiety", y = "BDI Total Score")
```




```
ggplot(asmr3, aes(x = BDI_group, y=BDI_TOTAL, fill = DealWithStress))+
  geom_boxplot()+
  theme(axis.text.x = element_text(angle = 20, vjust = 1),plot.title = element_text(hjust = 0.5), axis.
  labs(x = "BDI Group", title = "Watch to Deal with Stress", y = "BDI Total Score")
```

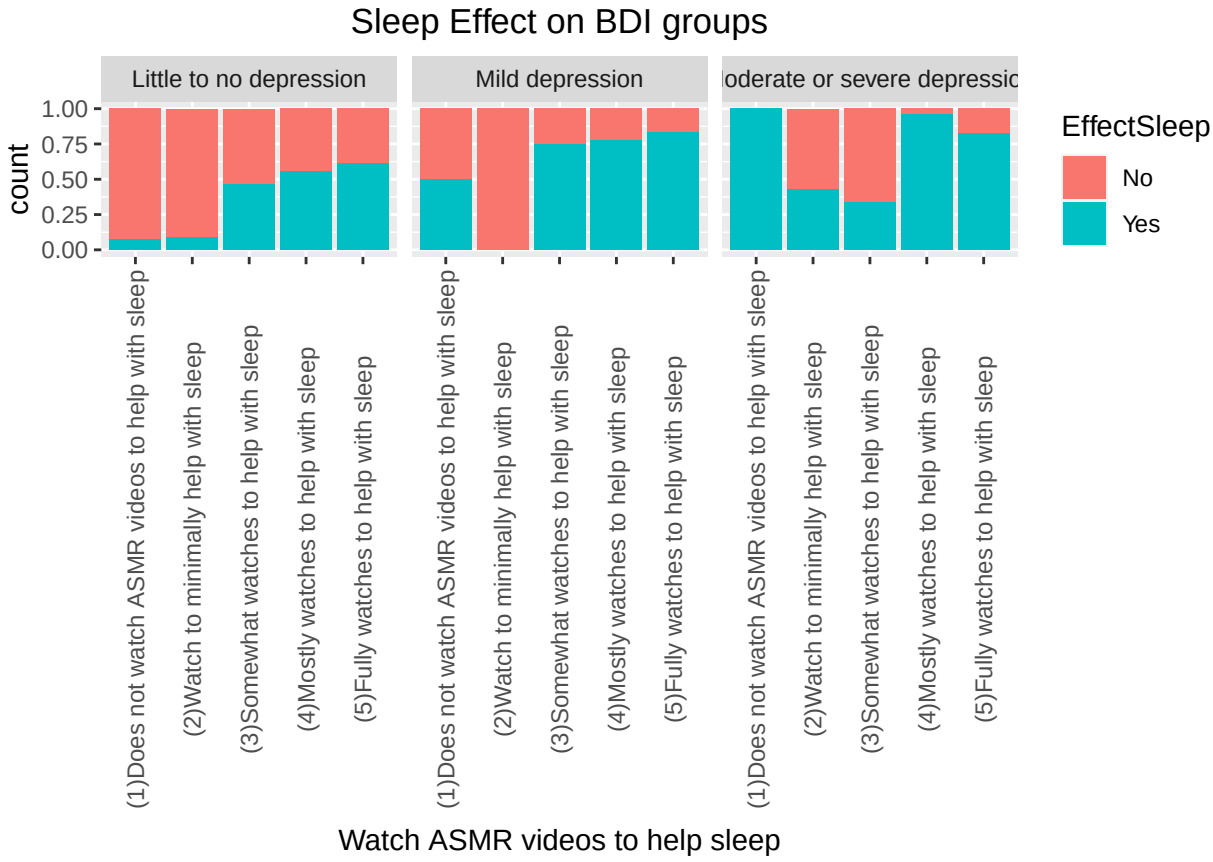



```
ggplot(asmr3, aes(x = BDI_group, y=BDI_TOTAL, fill = WatchToDealWithDepression))+
  geom_boxplot()+
  theme(axis.text.x = element_text(angle = 20, vjust = 1),plot.title = element_text(hjust = 0.5), axis.
  labs(x = "BDI Group", title = "Watch to Deal with Depression", y = "BDI Total Score")
```



Facet-wrapped Bar graph

```
ggplot(asmr3, aes(x = HelpMeSleep, fill = EffectSleep))+
  geom_bar(position="fill")+
  facet_wrap(~BDI_group)+
  theme(axis.text.x = element_text(angle = 90, vjust = 0.5),plot.title = element_text(hjust = 0.5), axis
  labs(x = "Watch ASMR videos to help sleep", title = "Sleep Effect on BDI groups")
```


Sleep Effect on BDI groups
Little to no depression
Mild depression
oderate or severe depressio
count
1.00
0.75
0.50
0.25
0.00
(1)Does not watch ASMR videos to help with sleep
(2)Watch to minimally help with sleep
(3)Somewhat watches to help with sleep
(4)Mostly watches to help with sleep
(5)Fully watches to help with sleep
EffectSleep
No
Yes
Watch ASMR videos to help sleep