

One and Two Sample Inference

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```
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
```

Confidence Interval for Proportions (One Sample Inference)

```
# First counting the data for how many participants said "Yes" to the EffectSleep variable
asmr%>%
  filter(EffectSleep == "Yes")%>%
  summarize(EffectSleep_yes = n())
```

```
##   EffectSleep_yes
## 1                282
```

```
prop.test(282, 475, conf.level = 0.95)
```

```
##
## 1-sample proportions test with continuity correction
##
## data: 282 out of 475, null probability 0.5
## X-squared = 16.303, df = 1, p-value = 5.397e-05
## alternative hypothesis: true p is not equal to 0.5
## 95 percent confidence interval:
##  0.5478735 0.6379561
## sample estimates:
##           p
## 0.5936842
```

Confidence Interval for Means(TWo Sample Inference of Paired Populations)

```
t.test(asmr$Mood_Daily, asmr$Mood_After_watch, paired = T, conf.level = 0.95)
```

```
##  
## Paired t-test  
##  
## data:  asmr$Mood_Daily and asmr$Mood_After_watch  
## t = -30.961, df = 474, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
##  -23.41418 -20.61951  
## sample estimates:  
## mean of the differences  
##                -22.01684
```