Data Analysis

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Packages used

```
#Packages Used
library(dplyr)
library(ggplot2)
library(afex)
library(rstatix)
library(lsmeans)
```

Loading data and functions

```
data <- read.csv("12986933.csv", header = T, sep = ",")
data <-  tibble::as_tibble(data)

source("SourceScript.R")
data <- cleanData(data)
source("SourceScript2.R")
```

Datasets seperated by time of measurement and combined

```
preCombined <- combine("pre")
postCombined <- combine("post")
datCombined <- combine("both")
datCombined <- datCombined %>% arrange(Ppn)
```

Descriptive statistics

```
options(pillar.sigfig = 5)
data.frame(summaryDat(cond0))
```

```
##     n Ratio_Women Mean_Age  SD_Age Mean_LSAS_Pre SD_LSAS_Pre Mean_LSAS_Post
## 1 124   0.5806452 45.35484 8.16914      100.5645     16.7142       74.64516
##   SD_LSAS_Post
## 1     23.17156
```

```
data.frame(summaryDat(cond1))
```

```
##     n Ratio_Women Mean_Age   SD_Age Mean_LSAS_Pre SD_LSAS_Pre Mean_LSAS_Post
## 1 120   0.5333333 44.38333 7.970727      102.0167    15.28208           76.2
##   SD_LSAS_Post
## 1     22.57477
```

```
data.frame(summaryDat(cond2))
```

```
##     n Ratio_Women Mean_Age   SD_Age Mean_LSAS_Pre SD_LSAS_Pre Mean_LSAS_Post
## 1 156   0.4102564 46.55128 8.607045      101.9103    17.18818       47.05128
##   SD_LSAS_Post
## 1     23.89528
```

Assumptions test (normality and homogeneity of variance)

```
assumptionTest(data)
```

```
## [1] "Normality Test: Pre-Test:"
## # A tibble: 3 x 4
##   Condition variable    statistic       p
##   <fct>     <chr>           <dbl>   <dbl>
## 1 0         LSAS.SR.pre   0.98994 0.89384
## 2 1         LSAS.SR.pre   0.98737 0.79120
## 3 2         LSAS.SR.pre   0.98793 0.67638
## [1] "Normality Test: Post-Test:"
## # A tibble: 3 x 4
##   Condition variable     statistic        p
##   <fct>     <chr>            <dbl>    <dbl>
## 1 0         LSAS.SR.post   0.95181 0.016329
## 2 1         LSAS.SR.post   0.98077 0.46210
## 3 2         LSAS.SR.post   0.98393 0.43282
## [1] "Homogeneity of Variance: Pre-Test:"
## # A tibble: 1 x 4
##     df1   df2 statistic       p
##   <int> <int>     <dbl>   <dbl>
## 1     2   197   0.56143 0.57130
## [1] "Homogeneity of Variance: Post-Test:"
## # A tibble: 1 x 4
##     df1   df2 statistic       p
##   <int> <int>     <dbl>   <dbl>
## 1     2   197   0.20986 0.81088
```

ANOVA test

```
mixedAnova <- mixAOV(datCombined)
```

```
## Contrasts set to contr.sum for the following variables: Condition
```

Reference table for plot

```
plotRef <- plotRef(datCombined)
```

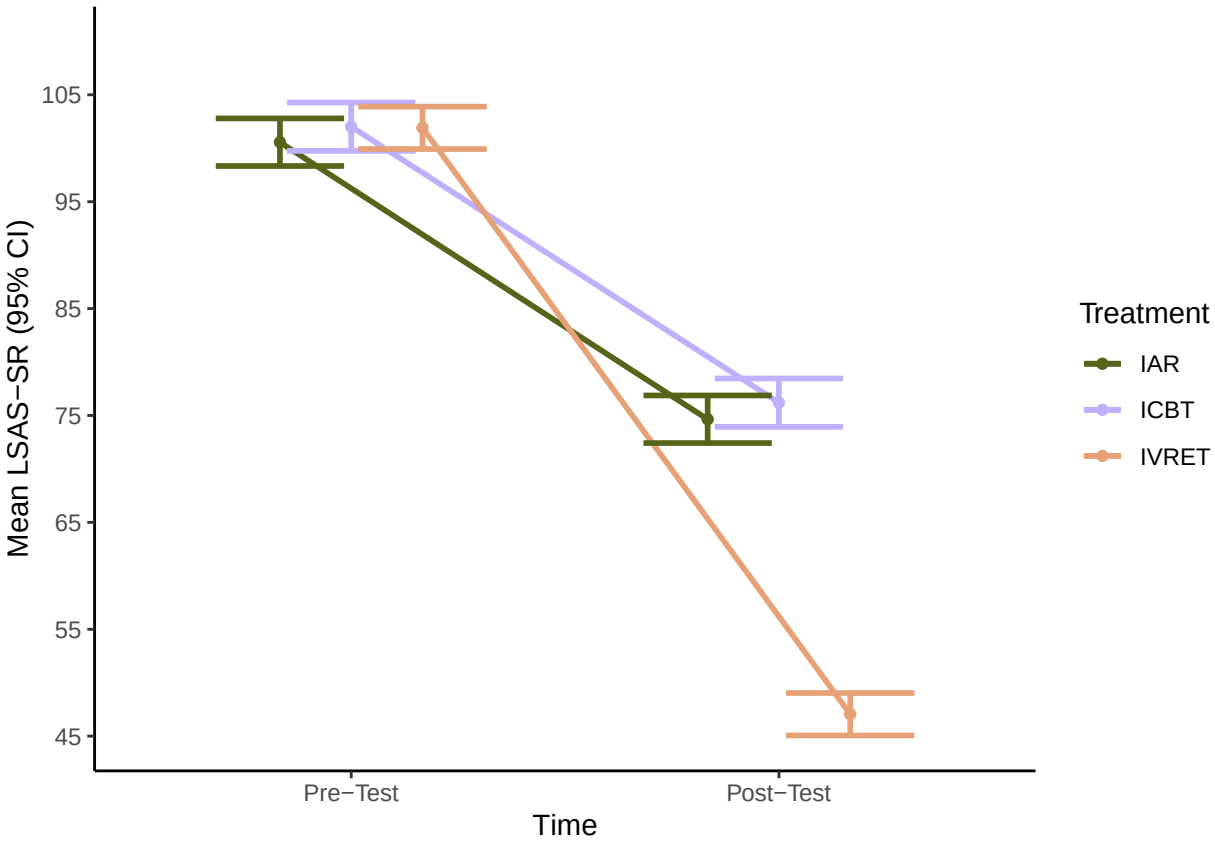
```
## Contrasts set to contr.sum for the following variables: Condition
```

Results of ANOVA and plot

```
summary(mixedAnova)
```

```
##
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity
##
##                 Sum Sq num Df Error SS den Df  F value    Pr(>F)
## (Intercept)    2766490      1   129224    197 4217.482 < 2.2e-16 ***
## Condition        18427      2   129224    197   14.046 1.983e-06 ***
## Time            124544      1    31131    197  788.142 < 2.2e-16 ***
## Condition:Time   19994      2    31131    197   63.263 < 2.2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
intPlot(plotRef) #Draw Interaction Plot
```


105
95
85
75
65
55
45
Mean LSAS−SR (95% CI)
Pre−Test
Post−Test
Time
Treatment
IAR
ICBT
IVRET