

cm_report

cmiller

printing some graphs

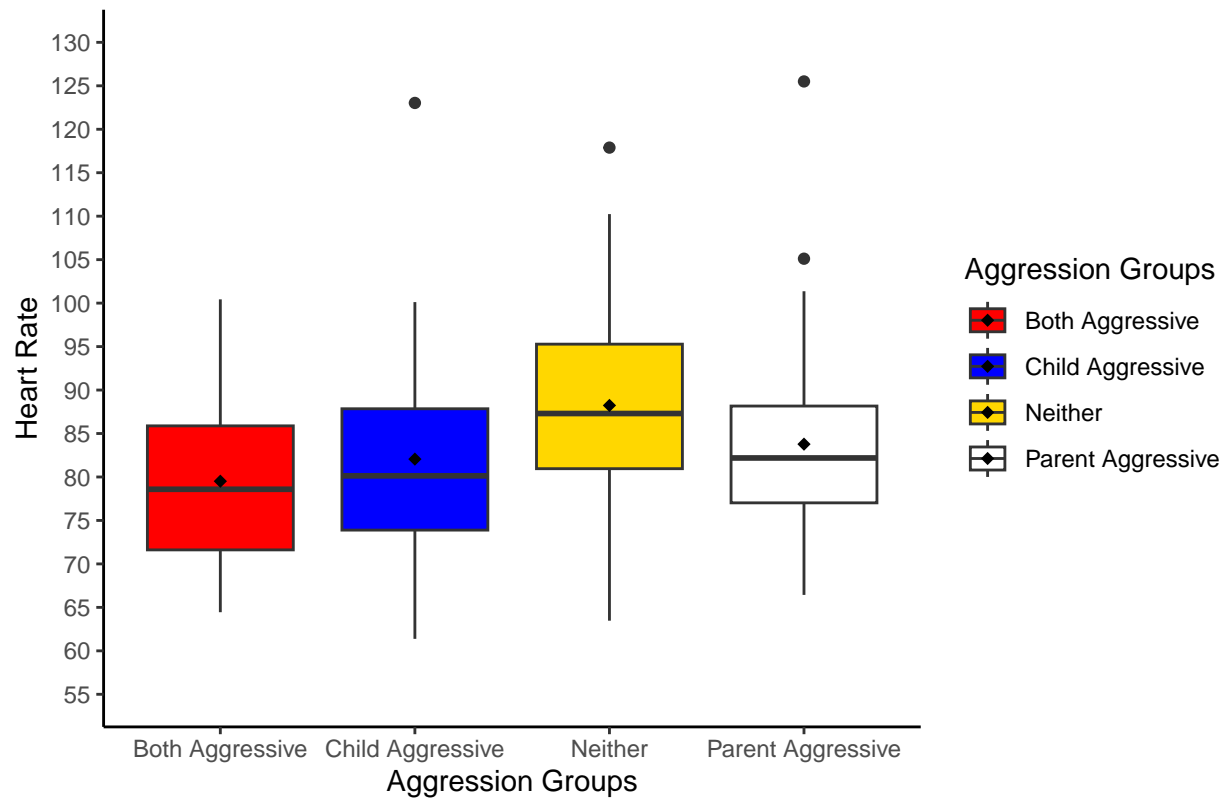
```
scores_and_vitals <- read_xlsx("Discontinuity Measures and Z scores.xlsx")
```

```
#glimpse(scores_and_vitals)  
#view(scores_and_vitals)
```

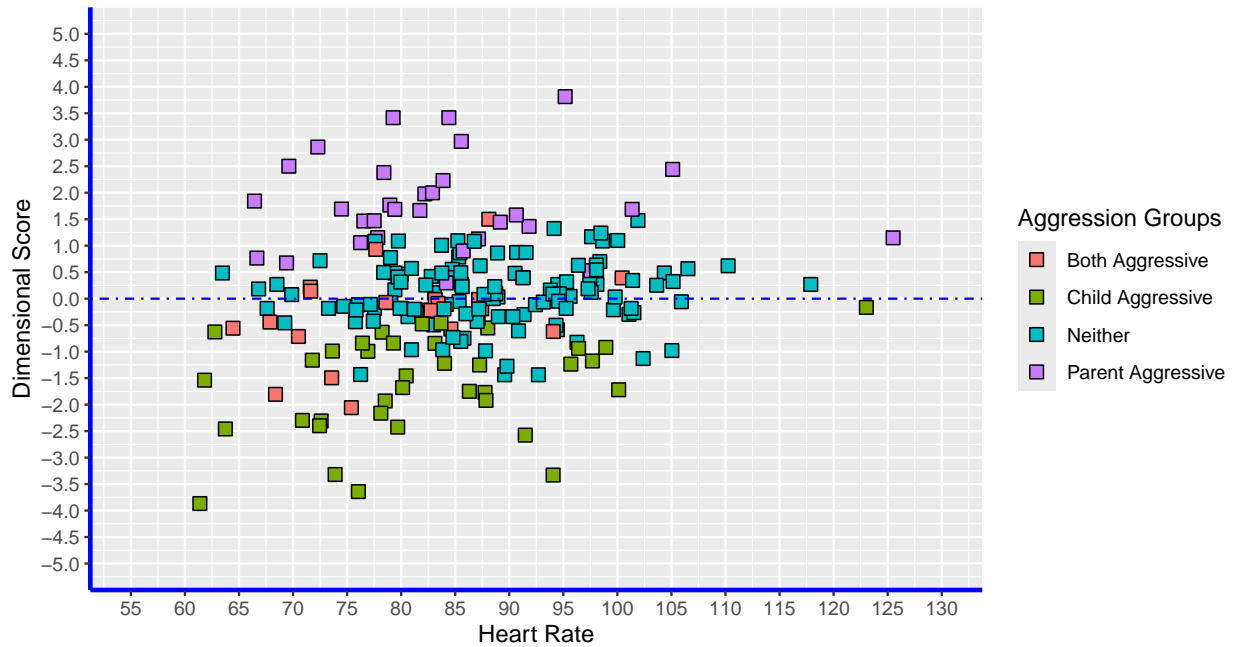
```
drop_na(scores_and_vitals)%>%  
ggplot(scores_and_vitals, mapping = aes( `Aggression Groups`, `Heart Rate`, fill= `Aggression Groups`))  
  
  geom_boxplot(outlier.size=1.5)+  
  stat_summary(fun = "mean", geom = "point", shape= 18, size = 2)+  
  labs(  
    xlab="Four Aggression Groups",  
    ylab="Resting Heart Rate",  
    title = "Resting Heart Rate in Four Aggression Groups")+  
  
  scale_y_continuous(limits = c(55, 130),  
                     breaks = seq(55, 130, by=5))+  
  
  theme( axis.line = element_line(colour = "dodgerblue",  
                                   size = 1, linetype = "solid"))+  
  scale_fill_manual(values = c("red", "blue", "gold", "white"))+  
  theme_classic()
```

```
## Warning: The 'size' argument of 'element_line()' is deprecated as of ggplot2 3.4.0.  
## i Please use the 'linewidth' argument instead.  
## This warning is displayed once every 8 hours.  
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was  
## generated.
```

Resting Heart Rate in Four Aggression Groups



Resting Heart Rate and Dimensional Discontinuity Score

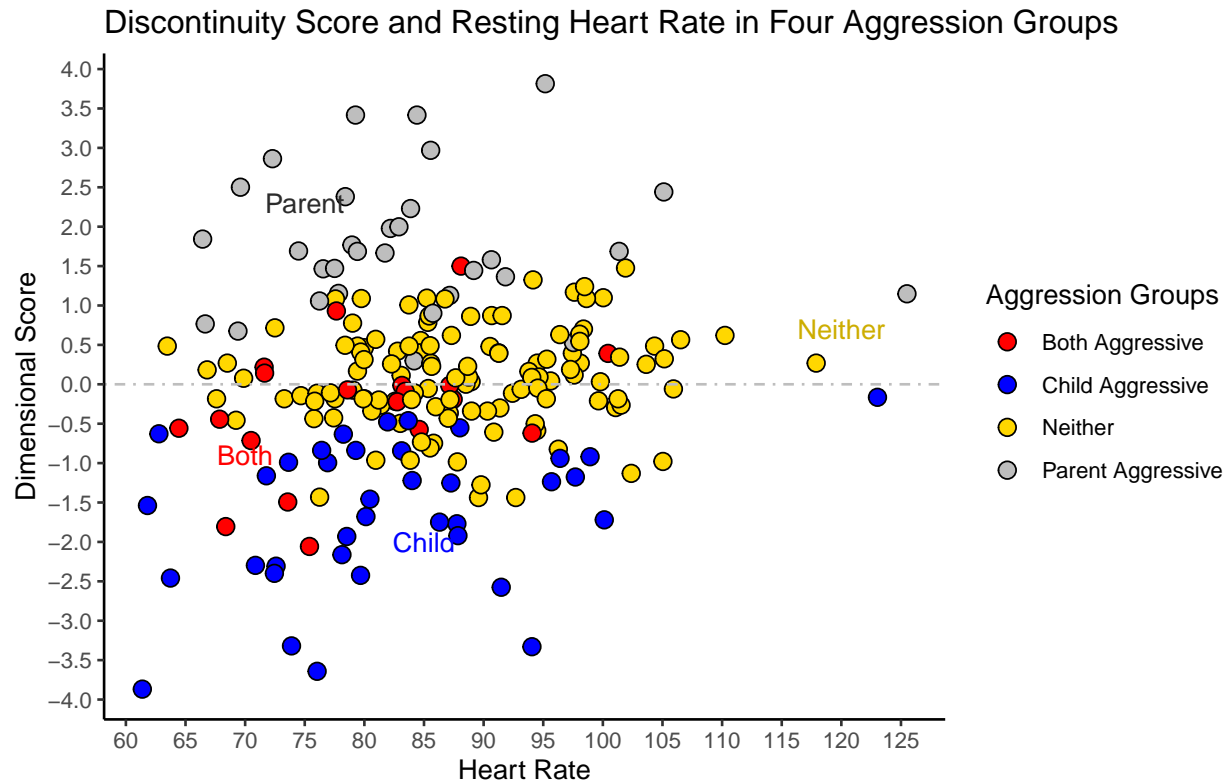


```
## Warning in annotate("text", x = 75, y = 2.3, label.size = 0.1, color =
## "gray17", : Ignoring unknown parameters: 'label.size' and 'fill'
```

```
## Warning in annotate("text", x = 70, y = -0.9, label.size = 0.1, color = "red",
## : Ignoring unknown parameters: 'label.size' and 'fill'

## Warning in annotate("text", x = 85, y = -2, label.size = 0.1, color = "blue", :
## Ignoring unknown parameters: 'label.size' and 'fill'

## Warning in annotate("text", x = 120, y = 0.7, label.size = 0.1, color =
## "gold3", : Ignoring unknown parameters: 'label.size' and 'fill'
```



```
tri_heart_rate <- read_xlsx("tri_hearts.xlsx")

#glimpse(tri_heart_rate)

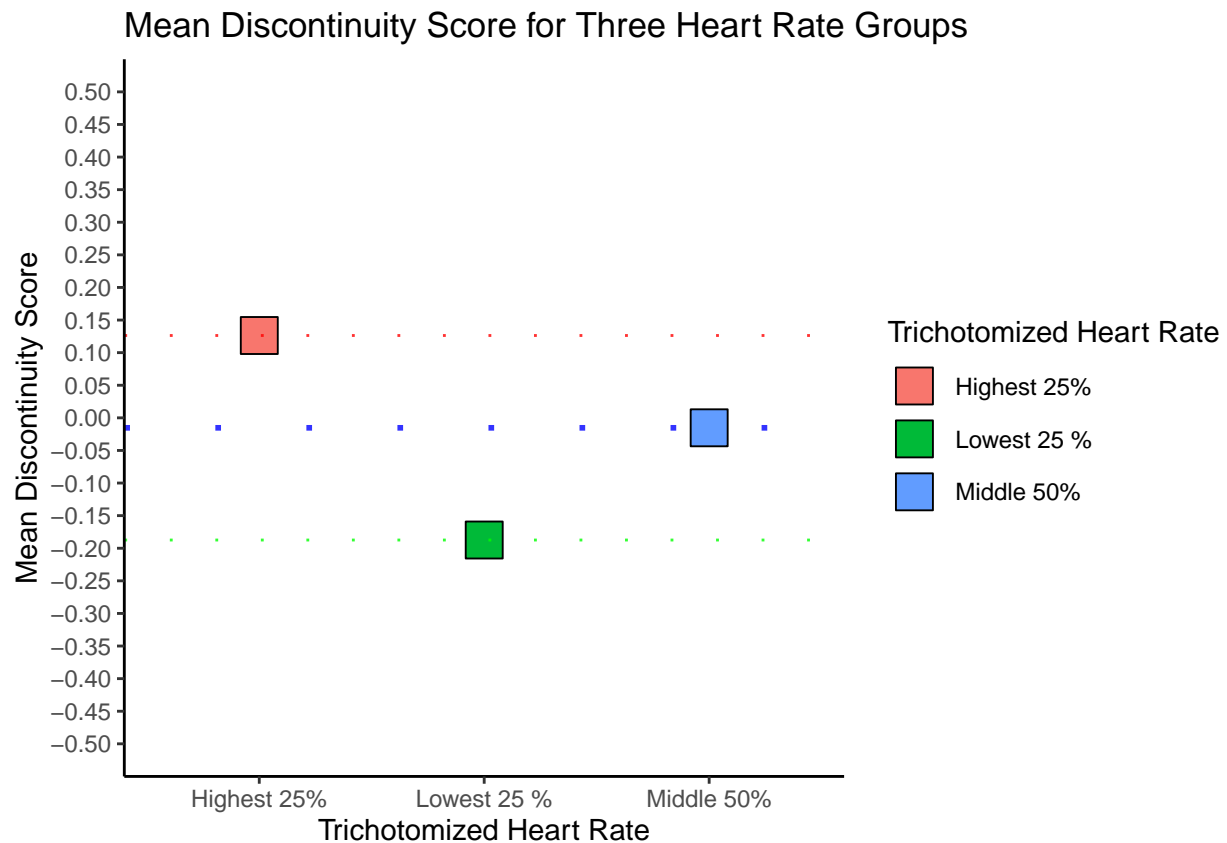
ggplot(tri_heart_rate, mapping = aes(`Trichotomized Heart Rate`, `Mean Discontinuity Score`, fill= `Tri
  geom_point(shape=22, size=7)+

  #geom_line()+
  # geom_line(aes(`Standard Deviation`, `Mean Discontinuity Score`))+
  labs(

    title = "Mean Discontinuity Score for Three Heart Rate Groups")+
    scale_y_continuous(limits = c(-0.5, 0.5),
      breaks = seq(-0.5, 0.5, by=0.05))+
```

```
geom_hline(yintercept = -.0153, linetype = "1F", size=1, alpha=0.8, color = "blue")+
geom_hline(yintercept = 0.1263, linetype = "1F", alpha=0.8,color = "red")+
geom_hline(yintercept = -0.1874, linetype = "1F", alpha=0.8,color = "green")+
theme_classic()
```

```
## Warning: Using 'size' aesthetic for lines was deprecated in ggplot2 3.4.0.
## i Please use 'linewidth' instead.
## This warning is displayed once every 8 hours.
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was
## generated.
```



```
## color = "green", fill="pink", label = "Child")
```

```
#View(tri_heart_rate)
```

```
#tibble(tri_heart_rate)
```

```
drop_na(scores_and_vitals)%>%
```

```
ggplot(scores_and_vitals, mapping = aes( `Aggression Groups`, `Dimensional Score`, fill= `Aggression Gr
```

```
geom_boxplot(outlier.size=1.5, outlier.color="darkslategray4")+
stat_summary(fun = "mean", geom = "point", shape= 18, size=2)+
labs(
```

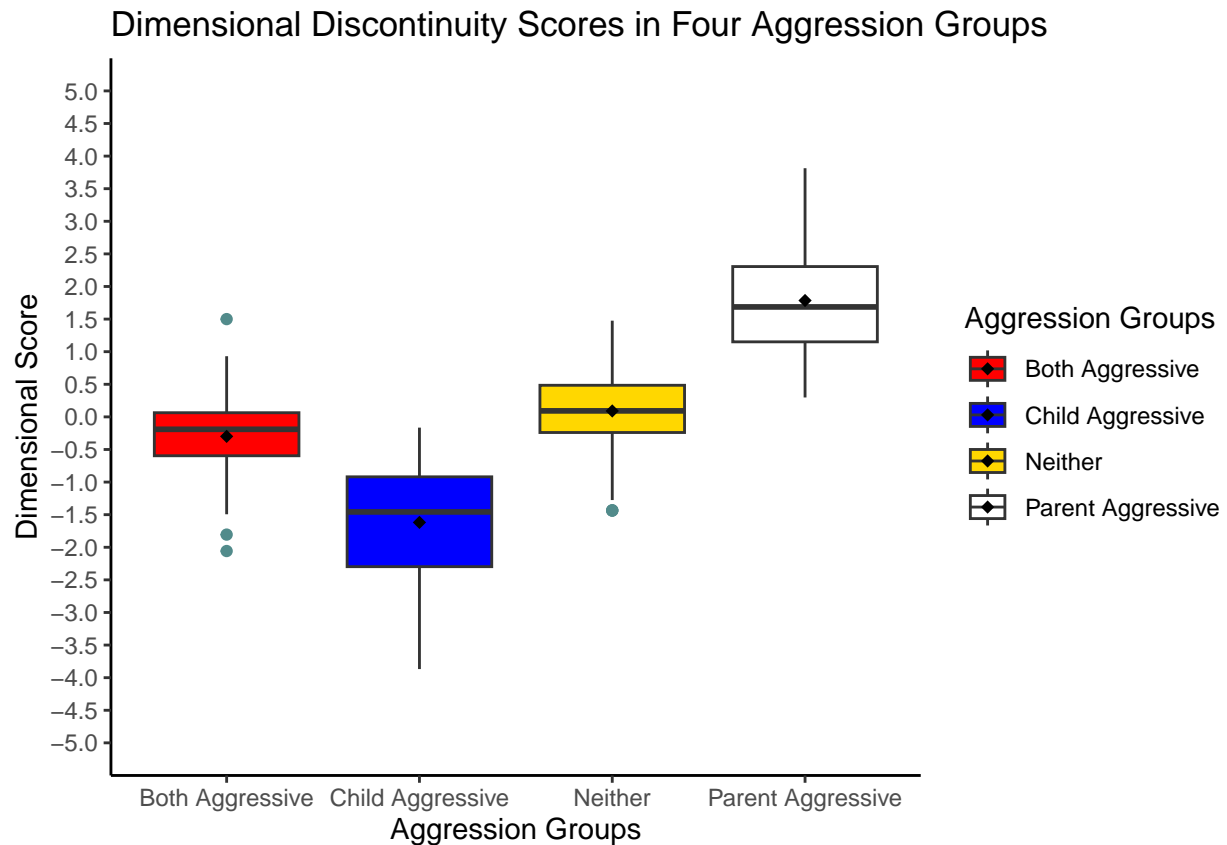
```

title = "Dimensional Discontinuity Scores in Four Aggression Groups")+

scale_y_continuous(limits = c(-5, 5),
                   breaks = seq(-5, 5, by=0.5))+

#theme( axis.line = element_line(colour = "dodgerblue",
                                #size = 1, linetype = "solid"))+
scale_fill_manual(values = c("red", "blue", "gold", "white"))+
theme_classic()

```



```
summary(scores_and_vitals)
```

```
##      ID      parent_aggression Parent Z Score  Parent Aggression Groups
## Min.   :5001      Min.   : 0.00      Min.   :-1.272584      Length:342
## 1st Qu.:5109      1st Qu.: 6.50      1st Qu.: -0.782272      Class :character
## Median :5215      Median :14.00      Median : -0.216528      Mode  :character
## Mean   :5216      Mean   :16.92      Mean    : 0.003617
## 3rd Qu.:5328      3rd Qu.:24.00      3rd Qu.: 0.537798
## Max.   :5445      Max.   :59.00      Max.    : 3.177939
##      NA's :11      NA's   :11
## child_aggression Child Z Score      Child Aggression Group Aggression Groups
## Min.   : 0.000      Min.   :-1.088833      Length:342      Length:342
## 1st Qu.: 2.000      1st Qu.: -0.776812      Class :character      Class :character
## Median : 5.000      Median : -0.308780      Mode  :character      Mode  :character

```

```
## Mean : 7.042 Mean : 0.009839
## 3rd Qu.:10.000 3rd Qu.: 0.471272
## Max. :27.000 Max. : 3.123450
## NA's :11 NA's :11
## Dimensional Score Heart Rate SCL RSA
## Min. :-3.868006 Min. : 61.38 Min. : -0.03744 Min. : 27.90
## 1st Qu.: -0.602077 1st Qu.: 78.98 1st Qu.: 4.89178 1st Qu.: 89.55
## Median : -0.070649 Median : 85.74 Median : 6.56400 Median :119.26
## Mean : -0.006222 Mean : 86.61 Mean : 6.99100 Mean :128.96
## 3rd Qu.: 0.568002 3rd Qu.: 93.65 3rd Qu.: 8.96250 3rd Qu.:165.90
## Max. : 3.814176 Max. :141.80 Max. :17.19665 Max. :319.22
## NA's :11 NA's :35 NA's :50 NA's :85
## PEP Trichotomized Heart Rate Groups Tertile Heart Rate Groups
## Min. : 51.00 Length:342 Length:342
## 1st Qu.: 68.00 Class :character Class :character
## Median : 80.00 Mode :character Mode :character
## Mean : 82.32
## 3rd Qu.: 95.00
## Max. :141.00
## NA's :69
## Quintile Heart Rate Groups Binary Heart Rate Groups age
## Length:342 Length:342 Min. : 7.512
## Class :character Class :character 1st Qu.: 8.595
## Mode :character Mode :character Median : 9.077
## Mean : 9.060
## 3rd Qu.: 9.534
## Max. :10.751
## NA's :1
```

```
drop_na(scores_and_vitals)%>%
#scores_and_vitals %>%
summarise(Parent_Aggression_STDEV= sd(parent_aggression),
Child_Aggression_STDEV = sd(child_aggression)
)
```

```
## # A tibble: 1 x 2
## Parent_Aggression_STDEV Child_Aggression_STDEV
## <dbl> <dbl>
## 1 12.9 6.64
```

```
mean_parents = mean(scores_and_vitals$parent_aggression, na.rm = TRUE)
mean_parents
```

```
## [1] 16.91843
```

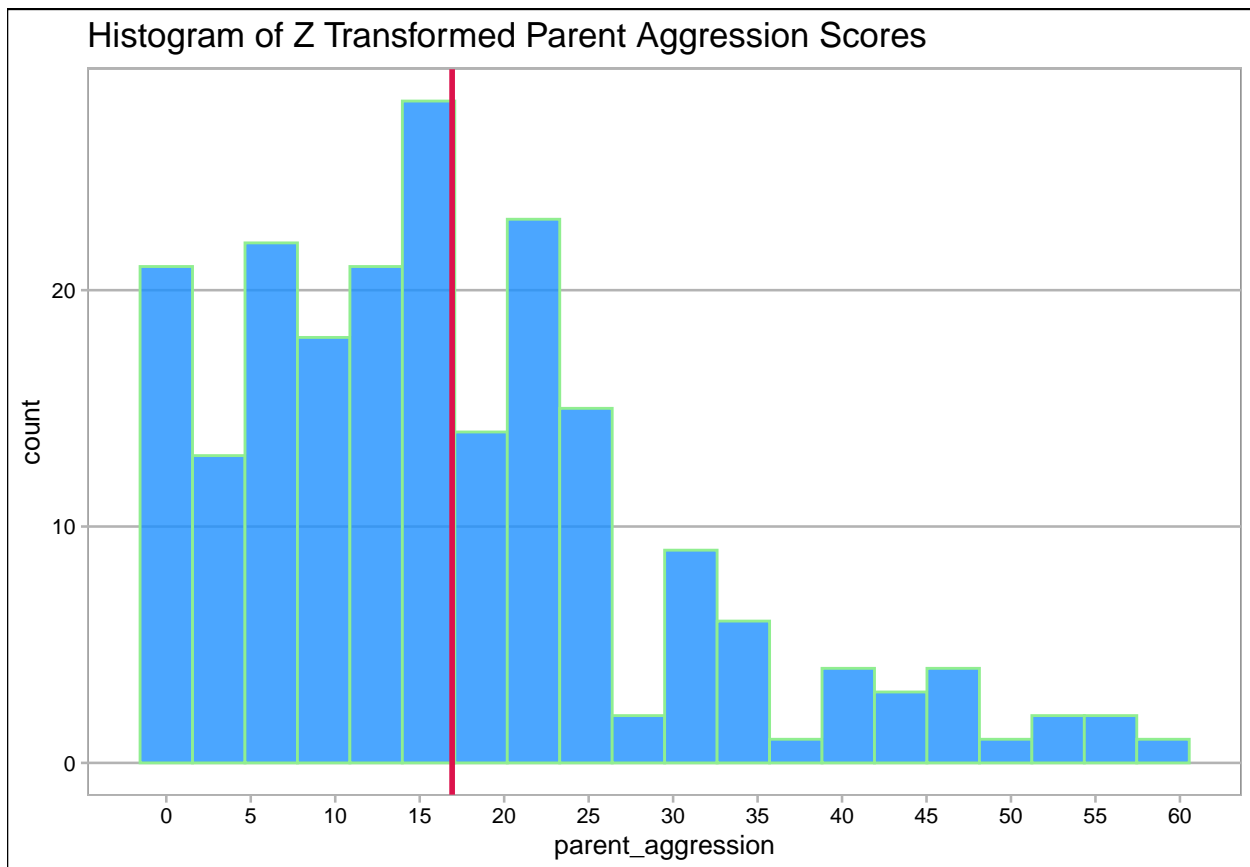
```
drop_na(scores_and_vitals)%>%
ggplot(scores_and_vitals, mapping=aes (parent_aggression)) +
geom_histogram(bins=20, fill="dodgerblue", color="lightgreen", alpha=0.8)+
#geom_vline(aes(xintercept= mean(`Parent Z Score` )))
#ggplot(scores_and_vitals, mapping= aes( `Parent Z Score`))+
```

```

#geom_histogram( position="identity", alpha=0.6, fill= "dodgerblue", color="pink")+

scale_x_continuous(n.breaks = 20)+
geom_vline(xintercept = mean_parents , color = "#dc134c", size=1)+
scale_y_continuous(n.breaks = 5)+
labs(
  title = "Histogram of Z Transformed Parent Aggression Scores",
  ylab = " ",
  xlab = " Z Scores "
)+
theme_calc()

```



```

# scale_x_continuous(limits = c(-3.0, 3.0))
#       breaks = seq(-3.0, 3.0, by=0.25)
# scale_x_continuous(limits = c(55, 130),
#       breaks = seq(55, 130, by=5))+
#
#theme( axis.line = element_line(colour = "blue",
#       size = 1, linetype = "solid"))
#geom_hline(yintercept = 0, linetype = "dotted", color = "blue")

```

```
mean_child = mean(scores_and_vitals$child_aggression , na.rm = TRUE)
```

```
mean_child
```

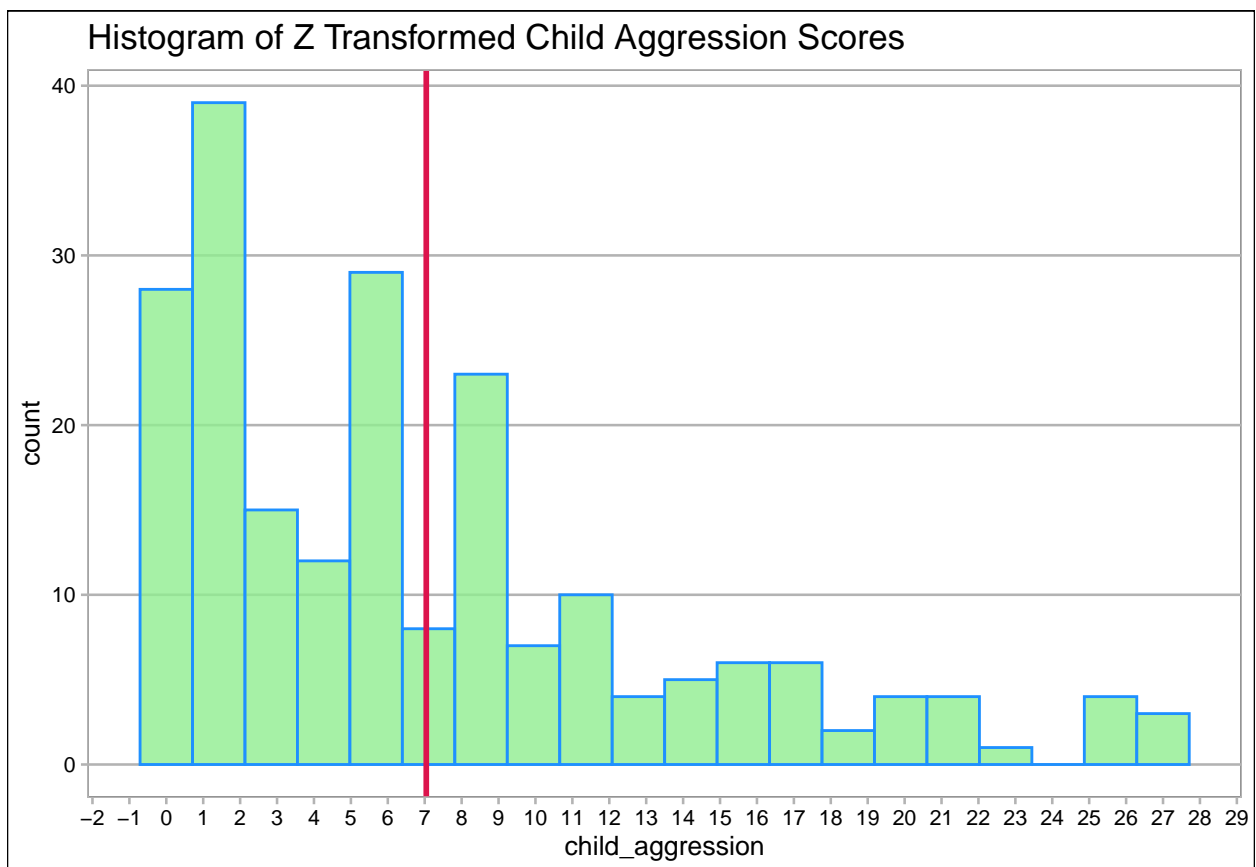
```
## [1] 7.042296
```

```
drop_na(scores_and_vitals)%>%

ggplot(scores_and_vitals, mapping=aes (child_aggression)) +
  geom_histogram(bins=20, fill="lightgreen", color="dodgerblue", alpha=0.8)+

  #geom_vline(aes(xintercept= mean(`Parent Z Score` )))
#ggplot(scores_and_vitals, mapping= aes( `Parent Z Score`))+
#geom_histogram( position="identity", alpha=0.6, fill= "dodgerblue", color="pink")+

scale_x_continuous(n.breaks = 25)+
geom_vline(xintercept = mean_child , color = "#dc134c", size=1)+
scale_y_continuous(n.breaks = 5)+
labs(
  title = "Histogram of Z Transformed Child Aggression Scores",
  ylab = " ",
  xlab = " Z Scores "
)+
theme_calc()
```



““