Appendix F

Result of logarithmic transformation of the Love variable

The logarithmic transformation applied to the "love" variable yielded a more symmetric distribution, as evidenced by the histogram, density plot, and QQ plot. This transformation effectively reduced the skewness observed in the original data, resulting in a distribution closer to normality. The box plot also indicates a more balanced distribution of data points with minimal outliers.

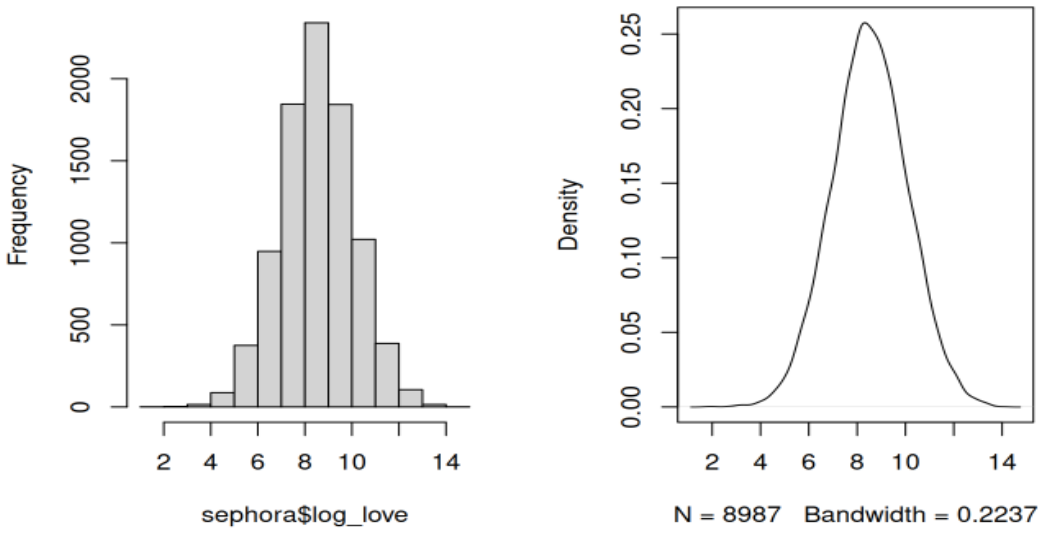
```{r}
# transforming the variable to log
sephora$log_love <- log(sephora$love + 2)

# Skewness and kurtosis
skewness(sephora$log_love)
kurtosis(sephora$log_love)
```

Skewness: -0.013 **Kurtosis:** 3.028

Histogram and density for value log love variable

```{r}
# Set up the plotting layout
par(mfrow = c(1, 2))
# Plot histogram and density
hist(sephora$log_love)
plot(density(sephora$log_love))
```



QQ and box plots for log love variable

```{r}
# QQ plot and boxplot
qqnorm(sephora$log_love, main = "QQ Plot for log_love varible")
qqline(sephora$log_love)

boxplot(sephora$log_love, horizontal = TRUE)
```