Lab #5 MIDUS Exercise

1. Create a MyLabActivities project in a new directory
2. Copy and paste MIDUS\_practice data into the directory you just created. MIDUS\_practice.csv can be found in *PSY\_RMstudent\_materials>Labs>Lab 5*
3. Copy and paste “MIDUS practice notebook” into the MyLabActivities directory. “MIDUS practice notebook” can be found in *PSY\_RMstudent\_materials>Labs>Lab 5*
4. Open MIDUS practice notebook and run the first code chunk to read and clean up the data. This exercise can be completed using only the tidyverse package. However if your solution requires additional packages, feel free to load them.

This practice data set contains 3 independent variables and one outcome variable (number of cigarettes smoked per day). Your task is to explore how groups of individuals who score high or low on tow of the IV’s differ on the DV.

1. Create a new grouping variable that indicates whether participants report high or low levels of maternal affection. (Don’t overwrite the original maternal affection variable!)
   1. Participants with maternal affection scores at least one standard deviation below the mean should receive a score of 1 on the grouping variable.
   2. Participants with maternal affection scores at least one standard deviation above the mean should receive a score of 2 on the grouping variable.
   3. Participants with maternal affection scores within one standard deviation of the mean should be labelled as missing (NA) on the grouping variable.
   4. Hint: if your data contains missing values, you may need to include the argument *na.rm=TRUE* when the functions *mean()* or *sd()*.
2. Convert the grouping variable into a factor with the levels “Low Maternal Affection” and “High Maternal Affection”
3. Filter any participants from your data who have missing values for the grouping variable you just created. (Hint: you may want to use the function *is.na()*, but there is more than 1 way to accomplish this step)
4. Create a new grouping variable that indicates whether participants report high or low levels of life satisfaction. (Don’t overwrite the original life satisfaction variable!)
   1. Participants with life satisfaction scores at least one standard deviation below the mean should receive a score of 1 on the grouping variable.
   2. Participants with life satisfaction scores at least one standard deviation above the mean should receive a score of 2 on the grouping variable.
   3. Participants with life satisfaction scores within one standard deviation of the mean should be labelled as missing (NA) on the grouping variable.
5. Convert the grouping variable into a factor with the levels “Low Life Satisfaction” and “High Life Satisfaction”
6. Filter any participants from your data who have missing values for the grouping variable you just created.
7. Subset your data so that it only contains maternal affection, your maternal affection grouping variable, life satisfaction, your life satisfaction grouping variable, and number of cigarettes smoked.
8. Filter any participants from your data who have missing values for number of cigarettes smoked per day.
9. Create a boxplot with maternal affection group on the x-axis and cigarettes on the y-axis.
   1. Add an appropriate title and axis labels
10. Create a boxplot with life satisfaction group on the x-axis and cigarettes on the y-axis.
    1. Add an appropriate title and axis labels