First, I will give a short introduction of the subject. The data we analyzed, comes from a bedtime procrastination study. The motivation for this study was the fact that research had shown that sleepiness was very well related to road traffic injuries and health problems like obesity. Bedtime procrastination is defined as voluntary delaying going to bed, despite knowing to be worse off as a result. In the study, the sleep behavior of the participants was monitored for almost two weeks. At the end of the study, the participants filled in a questionnaire about the study.

Inside the study, there was made a difference between two groups, namely an experimental and a control group. The main and only difference between the two groups was that for the experimental group, the lights dimmed automatically at the intended bedtime of the participant. They wanted to investigate if this could influence the bedtime procrastination behavior of people.

In our research, two questions were the point of focus, the first one is

*“Can bedtime procrastination be significantly influenced by experiment?”*

This question is investigated by analyzing the differences between the two groups and looking for significance. Jesse will talk about this later in the presentation.

The second question is:*“How well can bedtime procrastination be predicted?”*

For answering this question, we looked for correlations among the data and we build a regression model to predict the delay time.

In our analysis, we merged the two separate datasets to have multiple data for each participant of the study. We found out that not each participant did fill in the questionnaire, so we had to remove some of the data. Our final dataset consisted of 42 participants with each 11 variables, as you can see over here. Because we will talk about some of these variables in the remaining of the presentation, I will explain them now.

The first one is called ‘delay time’. With this, we mean the difference between the intended bedtime and the real bedtime. If your plan was to go to bed at 11 o’clock and you actually go to bed at 12 o’clock, your delay time is one hour or 3600 seconds.

The second variable is ‘bp\_scale’. This is a Dutch scale to measure the level of bedtime procrastination in a range from 0 to 9. The higher the number, the more a participant delayed their bedtime.

The third worth mentioning variable here is chronotype. This emphasizes if someone is a morning or an evening person on a 7 point scale. The higher, the more someone is considered an evening person.

The last variable is about the sleepiness of the participant. This scale ranges from 0 to 24 and indicates how drowsy someone felt during the day. The higher the number, the higher the drowsy feeling.

We will move on with the results of our analysis.

We made some correlation plots to look for relations between the variables. In this scatter plot, the one between the delay time and bp\_scale strikes out. A pretty well straight line could be drawn through the points, which means there probably is a high correlation between these variables. We calculated the corresponding correlation and it indeed was a strong positive correlation, which means that there is some positive relation between bp\_scale and delay time.