## **TU Dublin City Campus**

## **Probability and Statistical Inference**

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#### Week 5 Practical

## Difference

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#### **RESOURCES**:

1. Webinar on R notebooks with markdown

https://rstudio.com/resources/webinars/introducing-notebooks/

2.R markdown cheatsheet - https://www.rstudio.com/wp-content/uploads/2015/02/rmarkdown-cheatsheet.pdf

## Step 1.

- Download the zip file from Brightspace or the website that contains the datafiles we are using this week.
- Unzip to a location that makes sense for you.
- Make sure you have the data file and the notebook in the same folder or qualify the location of your data in your notebook.

## Step 2.

- Launch R Studio and open either the nb.html or the .rmd file for the lecture which addresses normality testing
- Review the commands, comments and output
  - o (if you are going to knit the html from the rmd file then you may need to have the data file in the same folder).

# Step 3.

- Open either the nb.html or the .rmd file for the lecture which addresses parametric difference testing
- Review the commands, comments and output
  - (if you are going to knit the html from the rmd file then you may need to have the data file in the same folder).

## Step 4.

- Open either the nb.html or the .rmd file for the lecture which addresses non-parametric difference testing
- Review the commands, comments and output
  - o (if you are going to knit the html from the rmd file then you may need to have the data file in the same folder).

### Step 5:

- Using survey.dat (use read.table) conduct tests to address the following:
  - Investigate whether there is a difference in Total Social desirability (tmarlow) scores for respondents who said they had children and those who said they did not
  - Investigate whether there is a difference in Life Satisfaction scores for respondents who said they had children and those who said they did not
  - Investigate whether there is a difference in Negative Affect scores for respondents who said they had children and those who said they did not
  - NOTE: you may have to assess relevant values for normality you do not need to repeat this you can use this information again

#### Step 6.

- Review the questions for the three datasets.
- Identify the type of tests required for Questions 1, 2 and 3
  - you do not need to do anything at this point to assess the dataset simply try to work out from the question and the variable types what type of test is needed).